

The CONSTRUCTOR

OFFICIAL PUBLICATION OF THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA



Volume XXXVI

MARCH 1954

Number 3

BUILDINGS

HIGHWAYS

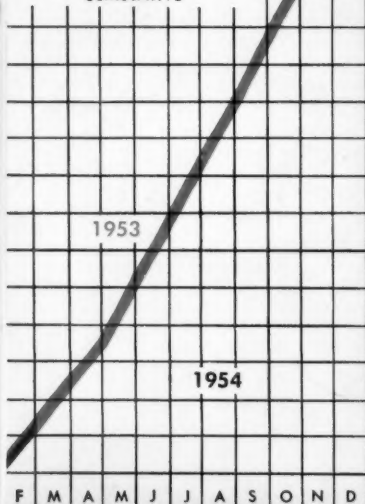
AIRPORTS

RAILROADS

PUBLIC WORKS



NEW CONSTRUCTION
(Billions of Dollars)
CUMULATIVE



A.G.C. Survey Indicates Keener Competition—21

Optimistic Tone Sounded in Economic Studies—22

Annual Report Recites A.G.C. Accomplishments—87

Here's why an **AUSTIN-WESTERN** power grader
gives you **30%** more power at the blade
and **twice** the maneuverability



Much of the time, All-Wheel Drive and All-Wheel Steer work as a team to provide **CONTROLLED TRACTION**. In this position, the rear drivers push behind the toe of the blade; the front drivers pull ahead of the heel of the blade, and the machine moves straight ahead with a load on its blade that would cause the ordinary grader to become unmanageable.

On the ordinary front steer, rear drive motor grader, the front end is just that much dead weight which the rear end has to push around. *Total* weight is not the measure of motor grader operating efficiency. What counts is the useful working weight carried on driving wheels; all other weight consumes power, and is a definite handicap.

On the Austin-Western Power Grader, there are no idling front wheels . . . no dead front end to consume power and decrease operating efficiency. All weight is on driving wheels—front and rear—contributing 100 percent to traction. Dynamometer tests, conducted with the greatest accuracy, have proved conclusively that with two graders of the same weight and horsepower, working in

first or second gear where real earthmoving is done, an all-wheel drive machine has 30 percent more power-at-the-blade than one with rear drive only.

With its ability to steer both ends of the machine in the same direction or opposite directions, the Austin-Western Power Grader has twice the maneuverability of other graders; works around short-radius curves impossible for machines with front steer only; turns easily on narrow roads and trails, and maneuvers more closely around culverts, bridges and other obstructions.

Spring and Summer, Fall and Winter, the A-W Power Grader outperforms all other motor graders . . . on all types of work, and under all conditions.

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Road Rollers • Hydraulic Cranes



Construction Equipment Division

Manufactured by
AUSTIN-WESTERN COMPANY
Subsidiary of Baldwin-Lima-Hamilton Corporation
AURORA, ILLINOIS, U.S.A.



Contractor Earns \$43,000 Bonus

with help of Ryerson re-bar service

Eighty-six days ahead of schedule, traffic again rolls along three of the busiest blocks of Chicago's Michigan Avenue—temporarily closed during construction of a huge underground garage. As a result, John Griffiths and Son Construction Co., the general contractor for the garage project, earned a bonus of \$500 a day, and the dependability of Ryerson reinforcing service was again demonstrated.

Day after day during the summer and fall, fabricated Ryerson re-bars were faithfully delivered as needed; there was no waiting—but no time-consuming rehandling of piled-up shipments either. Ryerson deliveries kept pace with the job—a job that beat a tight schedule by 86 days!

You can depend on Ryerson reinforcing service, too, from setting plans to steel on the site. Your re-bars will be accurately cut and bent to your specifications—metal-tagged for positive identification. On your next job we suggest you call your nearby Ryerson plant for lump sum or average pound prices.



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REINFORCING—Bars, wire fabric, spirals, etc.

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STRUCTURALS—Channels, angles, beams, etc.

PLATES—Many types including Inland Safety Plate.

BARs—Carbon and alloy, hot rolled and cold finished.

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MACHINERY & TOOLS—for metal fabrication.

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Six Firesafe Concrete Dormitories on Cornell's Beautiful Campus Erected with 'Incor' at Average Rate of a 5-story Frame every 11 Working Days

● Last Fall, six five-story dormitories—reinforced-concrete frames for utmost firesafety, speed, economy—were erected in record time on Cornell University campus: Foundations started August 13 . . . 1st floor concreted September 8 . . . last roof slab poured November 18, ahead of cold weather . . . 66 working days from first foundation to last roof slab (average, 11 days per building) . . . with foundations ranging from rock to caissons.

Good job planning and dependable 'Incor' high early

strength assure extra speed at less cost. Extra quality, too: You see it in the easy-placing mixes . . . in smooth exposed concrete surfaces . . . in minimum drying shrinkage . . . and in the intangible but important difference that the crew, conscious of quality on an 'Incor' job, gets the most out of the concrete.

Over 25 years' performance, on job after job, clearly shows that 'Incor' produces more dependable results, at less cost, than by experimenting with "an extra bag of ordinary cement in the mix." One contractor summed it up by saying that he sleeps sounder at night with 'Incor' on the job. *Reg. U.S. Pat. Off.

MEN'S DORMITORIES, CORNELL UNIVERSITY Ithaca, N. Y.

Architects & Engineers:
CHAPMAN, EVANS & DELEHANTY,
New York City

General Contractor:
C. E. YOUNGDAHL & CO., INC.,
Long Island City, N. Y.

Ready-mix 'Incor' Concrete:
RUMSEY-ITHACA COMPANY,
Ithaca, N. Y.

DRYING SHRINKAGE OF CONCRETE

Tests of 3x3x12-inch concrete beams, cured in air of 50% relative humidity at 70°F, after 1 day in mold. Results are average of 3 specimens for each cement from batches mixed on different days.

| Mix bags/cu. yd. | Water gal./bag | Drying Shrinkage—inches per 100 ft. | | | | |
|--|-------------------|-------------------------------------|------|------|-------|-------|
| | | 3 d | 7 d | 28 d | 3 mo. | 1 yr. |
| Average 10 Lone Star Type I Cements (6-inch slump) | | | | | | |
| 3½ | 10.59 | .156 | .264 | .516 | .612 | .648 |
| 4¼ | 8.27 | .156 | .24 | .516 | .624 | .684 |
| 5 | 6.78 | .18 | .252 | .528 | .66 | .696 |
| 6 | 5.62 | .168 | .228 | .48 | .636 | .684 |
| 7½ | 4.65 | .156 | .228 | .468 | .636 | .696 |
| Average 10 'Incor' Type III Cements (6-inch slump) | | | | | | |
| 3½ | 10.48 | .156 | .252 | .516 | .648 | .672 |
| 4¼ | 8.29 | .156 | .216 | .48 | .636 | .672 |
| 5 | 6.9 | .144 | .216 | .468 | .636 | .672 |
| 6 | 5.83 | .156 | .228 | .444 | .636 | .684 |
| 7½ | 4.93 | .156 | .24 | .48 | .648 | .708 |

Shrinkage of 'Incor' concrete is the same or less than concrete with Type I cements, through a wide range of equivalent mixes. 'Incor' develops greater strengths at early and later ages and is therefore better able to withstand shrinkage stresses. On the job, proper curing, starting at the earliest possible time, reduces shrinkage effects with all types of cement.



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The CONSTRUCTOR

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COVER

In Chicago, the new four-lane, eight-mile long Congress Street Super-highway is shown under construction at the Halsted Street traffic interchange. The \$92,000,000 freeway is being built to carry east-west traffic across Chicago from Lake Michigan to the western city limits, at which point it will join a similar eight-mile extension to be built by Cook County. The huge job will be partly elevated and partly in open cuts, with two large interchanges. The Lorain crane shown in picture is equipped with 48 inch tread shoes, and is used to unload and set steel and to handle 1½ yd. concrete buckets.

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THE CONSTRUCTOR, MARCH 1954



Dirt is removed for new Illinois Power & Light Company dam



JOB-ENGINEERED FINANCE PLANS



More power is on the way for eastern Illinois with the construction of the Illinois Power and Light Company dam. Helping push the job to completion is the E. E. Schnitzius Co., Inc., of Indianapolis. His portion of the project: speedy removal of $\frac{1}{2}$ million yards of dirt, at rates up to 9,000 yards a day.

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plete projects like this one. In his own words: "C.I.T. Corporation installment purchase plans have helped me to put practically all my equipment on the job."

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Volume of construction should see a heavy spurt in new highways, a moderate gain in building and a dip in heavy engineering projects in the next six months, a nation-wide survey by The Associated General Contractors of America indicated. Dominating this picture will be intensifying competition which is reducing bid prices and causing general contractors to take many jobs at cost to keep their organizations at present level. (Page 21)

Annual report to the 35th convention of the A.G.C. in Los Angeles was made by Managing Director H.E. Foreman, who told the contractors: "The vitality of the construction industry is demonstrated by the fact that after the last of emergency controls over construction activity were removed early last year, the industry during 1953 established another all-time record for the volume of work put in place." (Page 87)

Significant tone of testimony by business and government leaders before the Congressional Joint Committee on the Economic Report reflects agreement, for the most part, with optimistic outlook of the President's economic report. Most opinions expressed were that current "readjustment" or "recession" will be mild and temporary. Panel of economists forecast over-all activity some 5 per cent less by end of year than peak last spring. (Page 22)

Judicial review of disputes arising from federal contracts received House Judiciary subcommittee approval Feb. 25, with revisions proposed by the Comptroller General in language of the bill (S. 24) already passed by the Senate. (Page 28)

The subcontractor bill (H.R. 1825) hit a snag when the House Rules Committee on Feb. 17 denied the request of its author, Rep. Edgar A. Jonas (R., Ill.), for a special rule to bring it to the floor. (Page 28)

Many important decisions affecting construction directly or indirectly have been handed down recently by the

Supreme Court, lower federal and state courts, and the National Labor Relations Board. Rulings were made in cases concerning discrimination in hire and tenure of employment based on union membership, state right-to-work laws, and conflicts between state and federal jurisdiction. (Page 30)

Rising trend of contract construction of rural electric and telephone systems was reported at conference of A.G.C. Task Unit for Rural Electrification Administration Specifications with REA officials Feb. 11. Drop of about 10% in new construction of distribution lines was forecast for 1954, but volume will remain large. (Page 43)

Senate Labor Committee ended hearings Feb. 9 on Taft-Hartley Act revisions and was expected to start work early this month drafting committee bill and report. House Labor Committee, after rejecting motion to put off consideration of Taft-Hartley changes for rest of this session, agreed to begin work Feb. 24 on amendments proposed by President Eisenhower. (Page 32)

Albert C. Beeson was confirmed by the Senate as member of National Labor Relations Board Feb. 18 by a 45-42 party-line vote. (Page 32)

President Eisenhower sent another major message to Congress Feb. 17 recommending amendments to the Atomic Energy Act to permit exchange of certain information on atomic weapons with friendly nations, and to develop peacetime potentials of atomic energy with the help of private enterprise. (Page 26)

The President's program as set forth in a series of messages to Congress—listing 196 specific recommendations for legislation—remained mostly in the committee hearing stage last month, and many items have not yet been taken up by committees. (Page 26)

Testimony in support of the McGregor federal-aid highway bill (H.R. 7818) was presented to the House Committee on Public Works Feb. 16 by George

C. Koss, incoming vice president of A.G.C. He assured the committee the construction industry has capacity to carry out an expanded highway program. (Page 27)

A.G.C. President C. P. Street appeared before the House Appropriations Committee Feb. 16 to request an amendment to TVA appropriations bill limiting amount TVA may spend on force account construction. (Page 27)

Slum clearance projects, totaling 52 areas in 32 cities, for which federal loans and grants have been approved are expected to result in a construction outlay of \$500 million, Housing and Home Finance Administrator Albert M. Cole said recently. (Page 57)

Largest federal-aid highway construction program in history would be authorized for fiscal years 1956-57 by the McGregor bill (H.R. 7818), announced last month by its author as the Administration measure for an expanded highway program. Bill calls for \$800 million each year compared to current authorization of \$575 million yearly. (Page 49)

A.A.S.H.O. estimates federal-aid highway system needs at \$35 billion in a revision of deficiencies published recently. The estimate, which includes a breakdown by states, reports that 63.8% of the total approved 673,137 miles of highways are in need of improvements. (Page 50)

A water policy to fit the needs of the entire nation is being sought by the Administration. In recent months President Eisenhower and his top advisers have made policy statements on the need for the coordinated development of water resources. Private groups have repeatedly called for an over-all policy to determine what role the federal agencies are to play in this field. (Page 52)

Vermont obtains highly satisfactory results in road upkeep by contract, Loyd W. Brownell, state highway maintenance engineer, reports in this month's *Constructor*. (Page 46)

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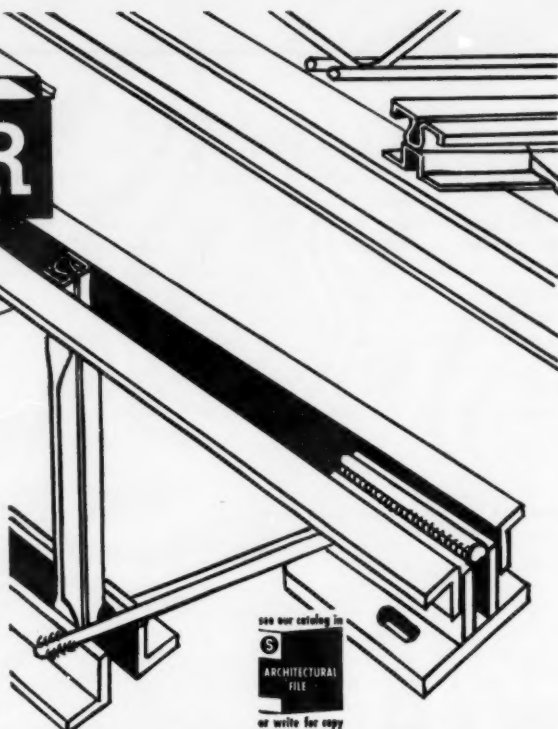
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A Series of Graphs Outlining the Construction Trend

Compiled by The Associated General Contractors of America

TREND OF CONSTRUCTION COSTS

The average of construction costs in the principal construction centers of the United States for February stands at Index Number 420 according to the A.G.C. Index. The cost figure for February 1953 was 398. The 1913 average equals 100.

WAGE AND MATERIAL PRICE TRENDS

The average of wages in the principal construction centers of the United States stands at 587 for February. One year ago the average stood at 557. The average prices paid by contractors for basic construction materials for February stand at Index

Number 310. The average a year ago stood at 293. The 1913 average, again, equals 100.

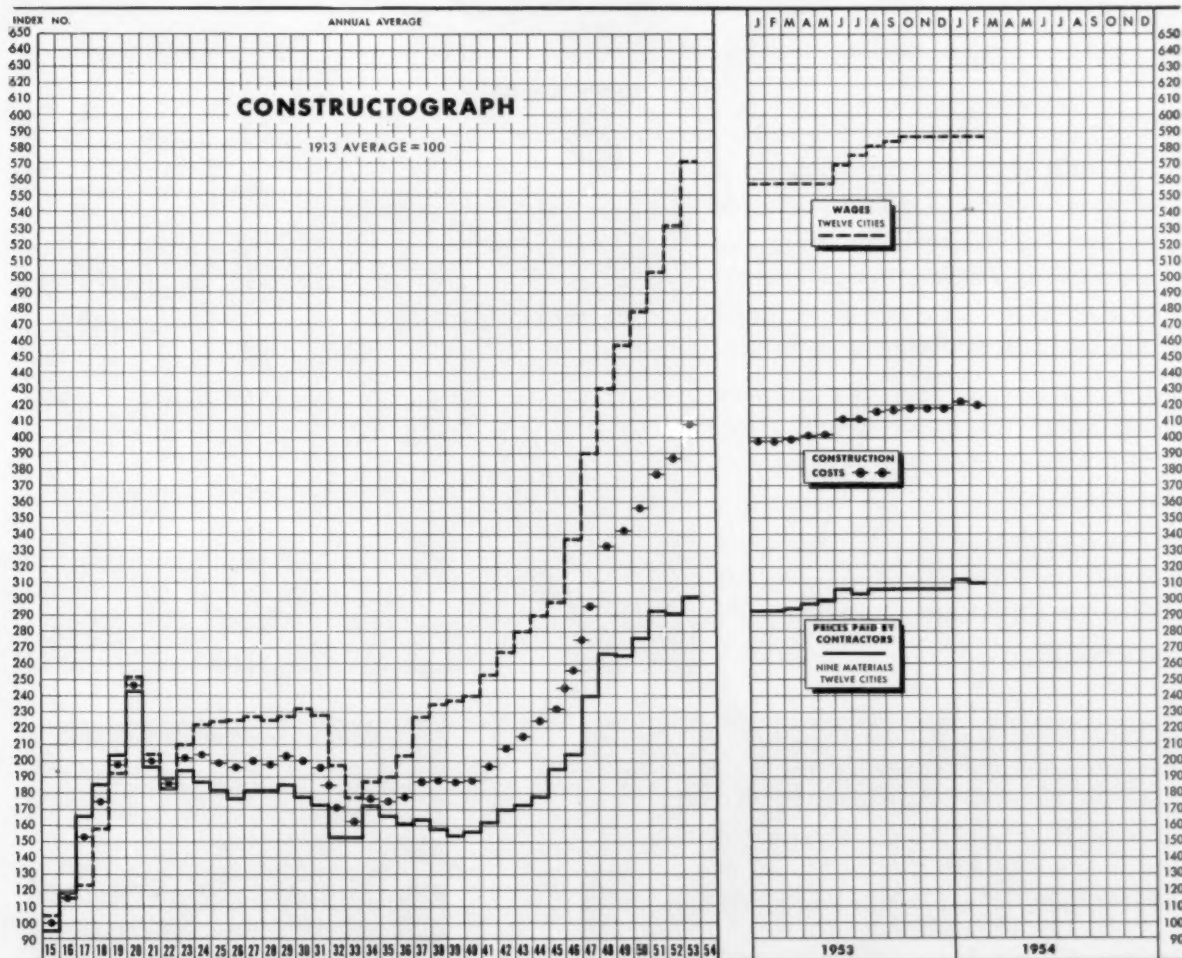
CONTRACT AWARDS IN 37 STATES

The volume of contracts awarded during January (Index Number 207, based on 1936-38) is a decrease of 29 points from December and a decrease of 33 points from January 1953. (F. W. Dodge Corp.)

REVENUE FREIGHT LOADINGS

Revenue freight loaded during the first 8 weeks of 1954 totaled 4,834,035 cars. For the same period in 1953, loadings amounted to 5,412,688 cars. This represents a decrease of 10.6%.

● Wage, Material Price and Construction Cost Trends



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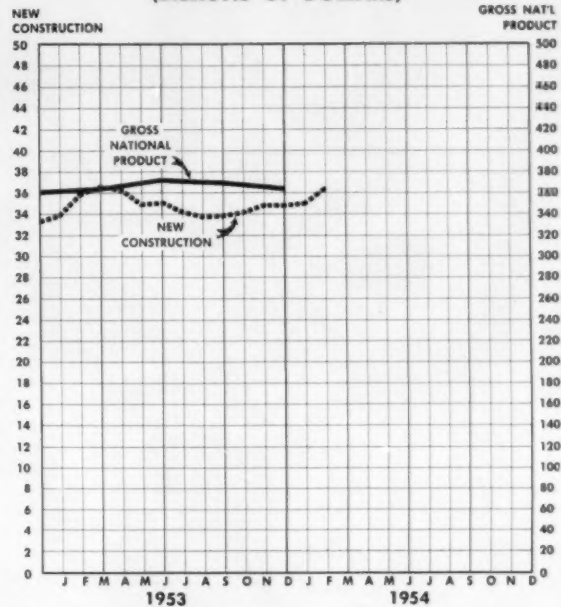
Concrete Reinforcing Bars
Hot Rolled Strip
Merchant Bars
Special Sections

● **TOTAL Construction Compared with Gross National Product**
(BILLIONS OF DOLLARS)



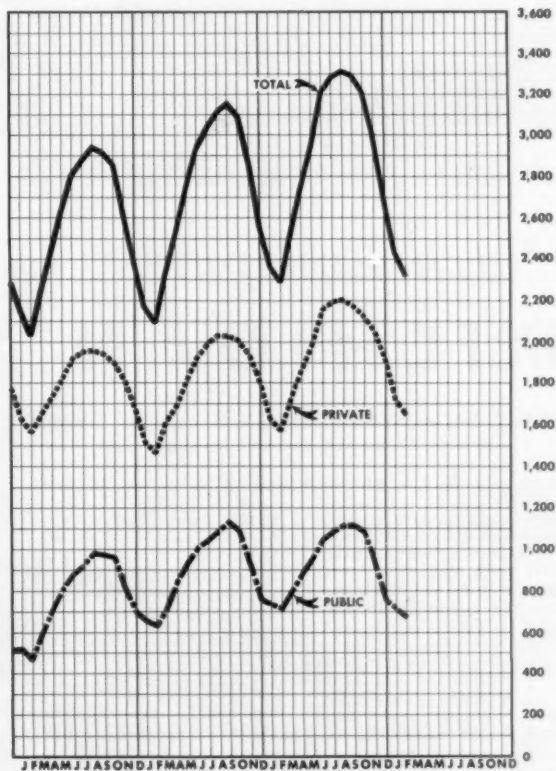
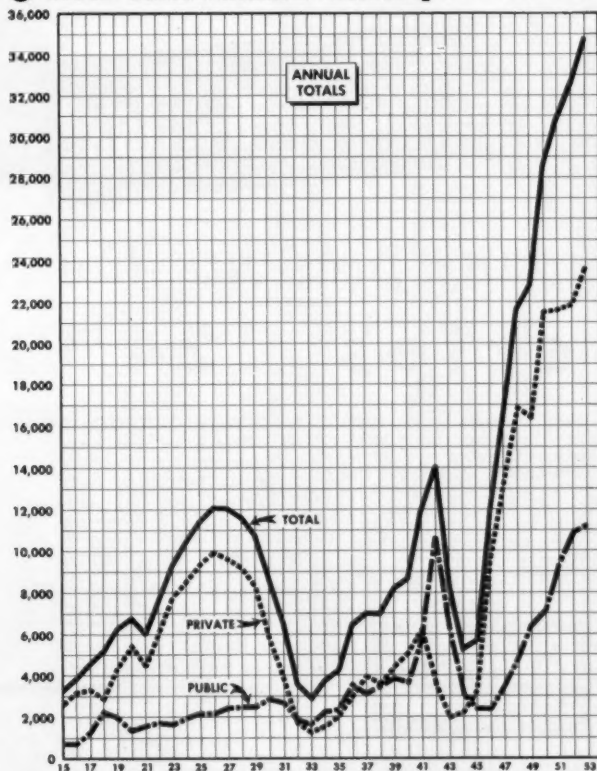
DATA SUPPLIED BY DEPT. OF COMMERCE

● **NEW Construction Compared with Gross National Product***
(BILLIONS OF DOLLARS)



* Seasonally adjusted at an annual rate

● **New Construction Activity** (MILLIONS OF DOLLARS)



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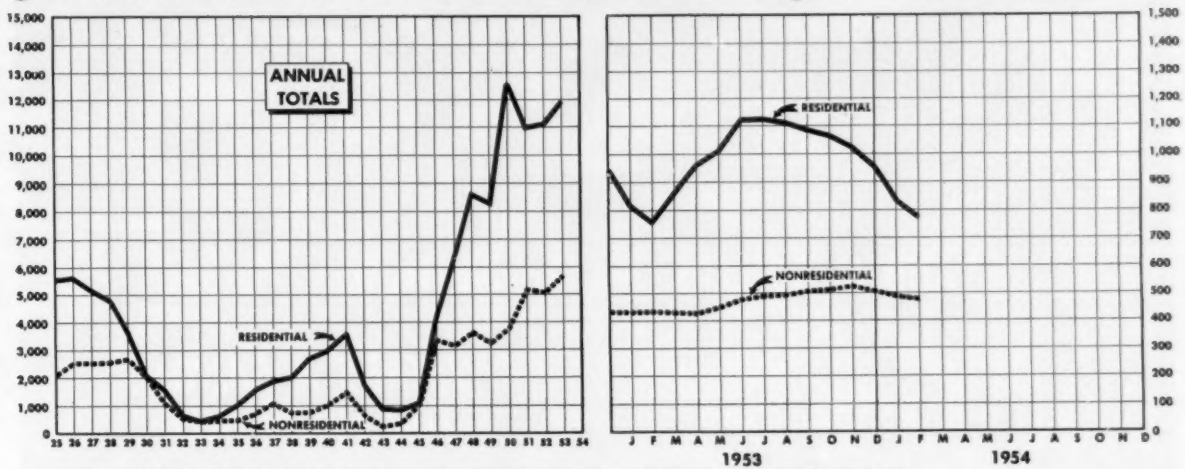
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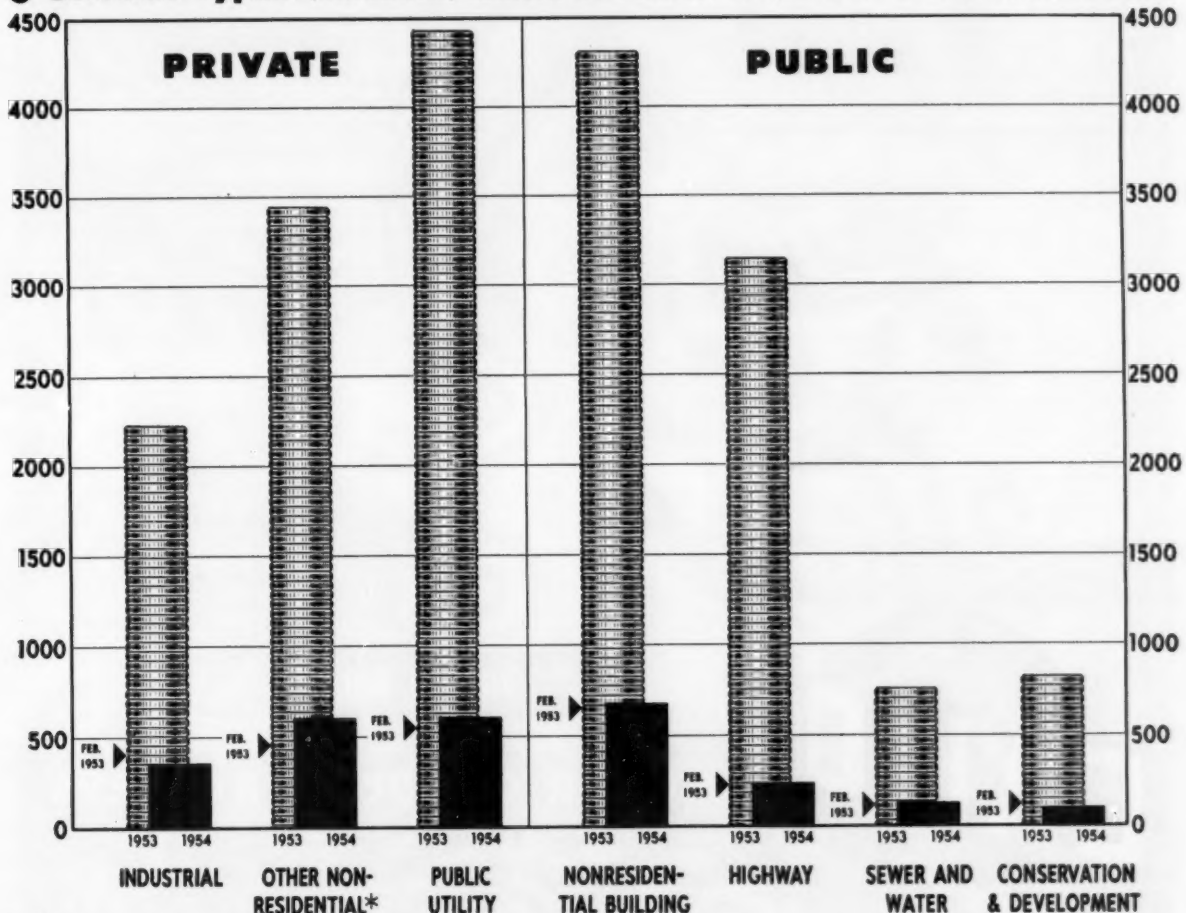
City _____ Zone _____ State _____

NEW CONSTRUCTION ACTIVITY

● Private Residential and Nonresidential Building * (MILLIONS OF DOLLARS)



● Selected Types: (CUMULATIVE, MILLIONS OF DOLLARS) 1953, 1954 VOLUME THROUGH FEBRUARY

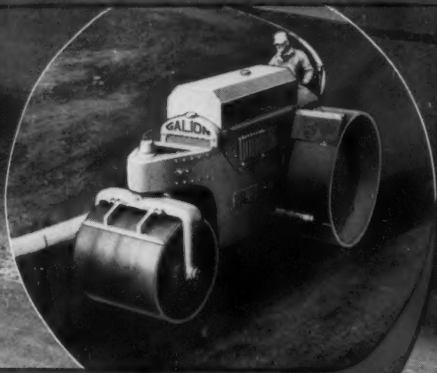


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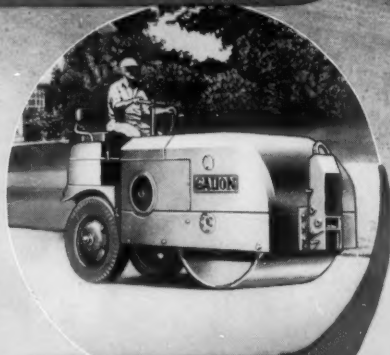
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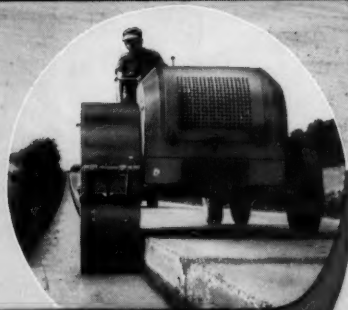
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For Moderate Income Families in Large Cities

(Formerly referred to as the "Cost of Living Index," compiled by the Bureau of Labor Statistics)

The cost of living reached the second highest point in history in January, when the Consumers' Price Index averaged 115.2, the U. S. Department of Labor's Bureau of Labor Statistics reported last month. The all-time high of 115.4 was set last October. The 0.3% rise in prices of goods and services purchased by wage and clerical workers' families offset the decrease which took place in December.

Mainly responsible for the upturn were food (up 0.7% during the month) and transportation (up 1.2%). Medical care and personal care rose 0.1% each. Apparel prices dropped 0.4%, and reading and recreation declined 0.2%. Housefurnishings decreased in price, but rents again increased.

In food, the principal factors in the upturn were increases for pork, coffee, and some fresh vegetables.

The rise in food prices brought the U. S. food index to 113.1 in January, on the basis of 1947-49 as 100. The food index was at the same level as a year ago, but 12.5% higher than in June 1950. Food prices averaged higher than a month ago in all but two of the 46 cities surveyed.

The Consumer Price Index, formerly calculated on the base 1935-39=100, was converted beginning last year to the new base 1947-49=100 in compliance with recommendations of the Bureau of the Budget.

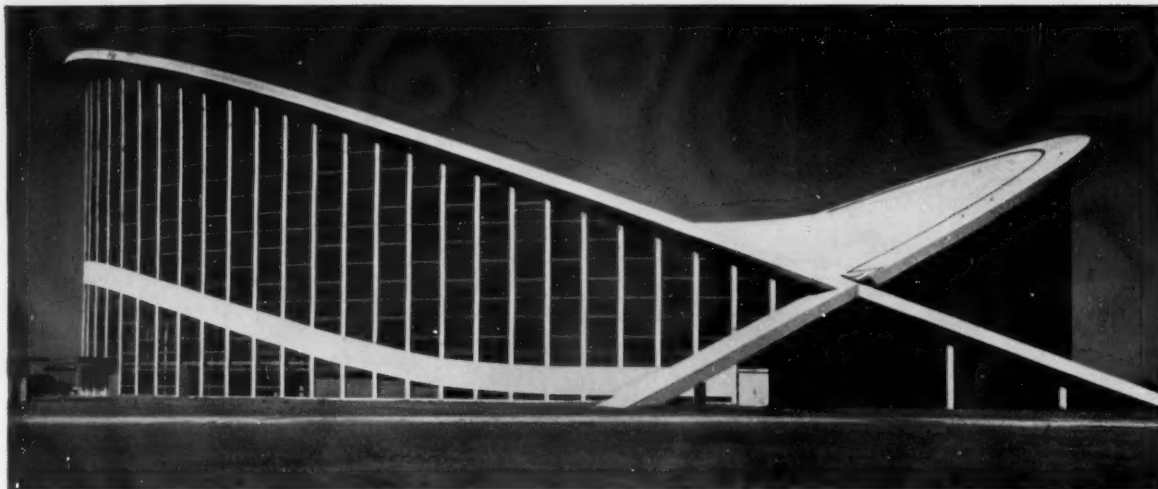
A portion of this index below indicates the average changes in retail prices of selected goods, rents and services bought by the average family of moderate income from November 15, 1951 to January 15, 1954.

They are represented here for use by employers who may wish to take these cost of living data into consideration when contemplating adjustments of wages based on increased living costs.

Aside from the change of the base years, the revised index includes prices of about 300 items, compared to some 200 for the previous index. The "weight" assigned to items is now based on facts concerning family expenditures of wage earners and clerical workers found in a survey on consumer expenditures conducted by the bureau.

The first five cities in the table below are checked and reported on monthly. The other 15 cities are surveyed and their indexes published quarterly.

| | 1951 | | 1952 | 1952 | | 1953 | 1953 | | 1954 |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | NOV. | DEC. | JAN. | NOV. | DEC. | JAN. | NOV. | DEC. | JAN. |
| Average..... | 112.8 | 113.1 | 113.1 | 114.3 | 114.1 | 113.9 | 115.0 | 114.9 | 115.2 |
| New York, N. Y..... | 111.2 | 111.2 | 111.3 | 112.9 | 112.0 | 111.7 | 112.9 | 113.0 | 113.0 |
| Chicago, Ill..... | 114.1 | 114.0 | 114.0 | 115.1 | 114.6 | 114.2 | 116.4 | 116.4 | 116.7 |
| Los Angeles, Calif..... | 113.5 | 113.9 | 113.7 | 115.1 | 115.3 | 115.4 | 116.1 | 115.8 | 116.8 |
| Philadelphia, Pa..... | 113.6 | 113.7 | 113.5 | 114.7 | 114.7 | 114.3 | 114.7 | 115.0 | 115.3 |
| Detroit, Mich..... | 113.4 | 113.7 | 113.7 | 115.3 | 116.0 | 115.7 | 116.7 | 116.4 | 117.0 |
| Atlanta, Ga..... | 115.6 | ..... | ..... | 117.1 | ..... | ..... | ..... | 117.1 | ..... |
| Baltimore, Md..... | ..... | 112.4 | ..... | ..... | 114.4 | ..... | ..... | 114.5 | ..... |
| Boston, Mass..... | 111.8 | 112.4 | 111.8 | 112.7 | 112.4 | 112.1 | ..... | ..... | 112.7 |
| Cincinnati, Ohio..... | 111.5 | 111.6 | 111.8 | 112.5 | 112.5 | ..... | ..... | 114.6 | ..... |
| Cleveland, Ohio..... | 112.7 | ..... | ..... | 113.6 | ..... | ..... | 115.5 | ..... | ..... |
| Houston, Texas..... | 115.2 | 115.8 | 115.4 | 116.0 | 116.7 | ..... | 117.3 | ..... | ..... |
| Kansas City, Mo..... | ..... | ..... | 113.2 | ..... | ..... | 114.3 | ..... | ..... | 115.0 |
| Minneapolis, Minn..... | ..... | 113.3 | ..... | ..... | 114.6 | 114.4 | ..... | ..... | 116.6 |
| Pittsburgh, Pa..... | 112.9 | 112.8 | 113.1 | 113.5 | 113.4 | 112.6 | ..... | ..... | 114.4 |
| Portland, Ore..... | ..... | ..... | 114.9 | ..... | ..... | 114.6 | ..... | ..... | 115.4 |
| St. Louis, Mo..... | ..... | 114.0 | ..... | ..... | 114.9 | ..... | ..... | 116.9 | ..... |
| San Francisco, Calif..... | ..... | 113.0 | ..... | ..... | 115.6 | ..... | ..... | 116.9 | ..... |
| Scranton, Pa..... | 111.6 | ..... | ..... | 113.1 | ..... | ..... | 113.4 | ..... | ..... |
| Seattle, Wash..... | 113.9 | ..... | ..... | 115.6 | ..... | ..... | 116.4 | ..... | ..... |
| Washington, D. C..... | 112.5 | ..... | ..... | 113.8 | ..... | ..... | 114.3 | ..... | ..... |



State Fair Arena, Raleigh, North Carolina

Building completed, ready for landscaping. Note the long, clean lines made possible by the use of modern concrete construction techniques.

Architect: **WM. HENLEY DETRICK**, Raleigh, N. C. • Consultant: **MATTHEW NOWICKI**, N. C. State College
Consulting Engineers: **SEVERUD, ELSTAD & KRUEGER**, New York City • General Contractor: **WM. MUIRHEAD CONSTRUCTION CO.**, Durham, N. C.

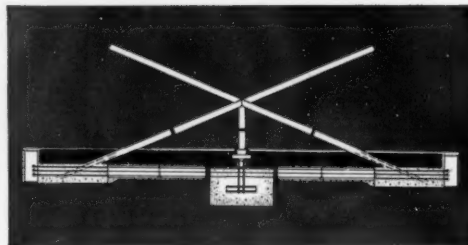
PRIZE-WINNING PAVILION built with LEHIGH PORTLAND CEMENT

The "Parabolic Pavilion", spectacular concrete arena at the Raleigh, N. C. State Fair Grounds, made architectural history. Awarded the Gold Medal by the Architectural League of New York as the outstanding achievement in engineering in 1952, it is a triumph of modern design and construction.

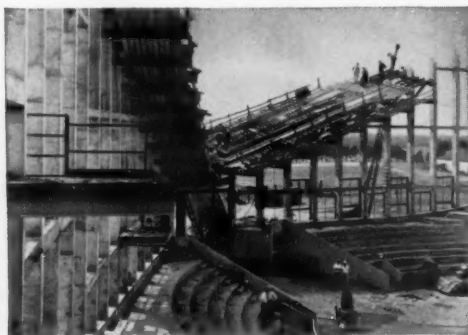
The design of this unique pavilion called for new construction techniques and materials of known characteristics. Wm. Muirhead Construction Company solved the many problems—in building the huge interlocked parabolic arches, in tying abutment ends, in suspending the catenary roof—by ingenious improvisations with standard equipment. Lehigh Cement was used from start to finish.

Whether you build big or small, traditional or modern, there are Lehigh Cements to meet your requirements. Our Service Department will be glad to help you with your specific problems.

LEHIGH PORTLAND CEMENT COMPANY
ALLENTOWN, PA.



Abutment ends are tied together by prestressed cables running through an underground tunnel.



Laying forms for pouring one of the two parabolic concrete arches from which the catenary roof is suspended. Arena floor is 221 feet in length, 127 feet at widest point of ellipse.



Exterior walls are translucent heat- and glare-reducing glass above lobby level, and heat-absorbing transparent glass on lobby level. Close-set vertical columns double as mullions.

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Sidelights for Contractors

By John C. Hayes, Counsel

Hayes and Hayes, Munsey Building, Washington 4, D. C.

Taxes

Revision of Revenue Code.—After lengthy hearings and consideration of thousands of taxpayer suggestions for improvements in the present tax laws, the Ways and Means Committee of the House has engaged in a complete revision of the Internal Revenue Code. The proposed legislation is intended to remove, without undue loss of revenue, many of the inequities and unnecessary hardships under present law and to make the Revenue Code more readable and understandable. The Committee Chairman, Representative Daniel Reed, has stated that two dozen or more major changes and some 3,000 minor changes will be made in the federal basic tax structure.

Partnership.—Among the proposals of the Ways and Means Committee is a comprehensive set of rules dealing with the taxation of partners and partnerships. These are intended to set forth clearly the tax treatment of property contributed to, or taken out of, a partnership, in addition to other difficult partnership problems. Moreover, as an aid to small business, the President has proposed that corporations with a small number of active stockholders be given the option of being taxed as partnerships, and certain partnerships permitted to be taxed as corporations.

State Sales Tax.—In a 6 to 3 decision, the Supreme Court has held that a state gross receipts tax is not applicable to a sale of construction equipment by a local dealer for use on a construction project awarded to a cost-plus-fixed-fee contractor by the Navy Department under the Armed Services Procurement Act. The court concluded, from the detailed facts in the case, that the government was the disclosed purchaser and the contractor merely its agent in purchasing the equipment, that title vested directly in the government, and that a state cannot levy taxes on the property or purchases of the government itself. The three dissenting justices thought the

court's 1941 decision in *Alabama v. King & Boozer* was indistinguishable and required that the state tax be sustained.

Stock Dividend.—A pro rata distribution to its two stockholders by a corporation of stock held in its treasury, a circuit court decided, resulted in a tax-free stock dividend, despite the fact that the treasury stock had been bought by the corporation from its former majority stockholder over a period of years with corporate earnings.

Entertainment Expenses.—Where a sales representative claimed an income tax deduction of \$3,881 for "entertainment expenses," the Tax Court agreed with the commissioner's action in disallowing charges for football tickets, fishing parties, and other items totaling \$2,408. The evidence indicated these expenditures were for personal friends rather than "ordinary and necessary" business expenses.

Business Club.—A luncheon club run for business men of one industry and availed of largely for business purposes was held by the Court of Claims to be subject to tax on dues and initiation fees paid the club, since the club's social features were also a material purpose, as shown by its charter, maintenance of an entertainment committee, and sizable bar profits.

Living Quarters.—The Tax Court decided that the value of living quarters furnished a maintenance engineer in connection with his employment at a state college was to be included in computing his taxable compensation, although his duties required that he be available 24 hours a day. One factor against this taxpayer as noted by the court was that state law specified that his living quarters were part of his compensation.

Lien Priorities.—The rule "first in time, first in right," the Supreme

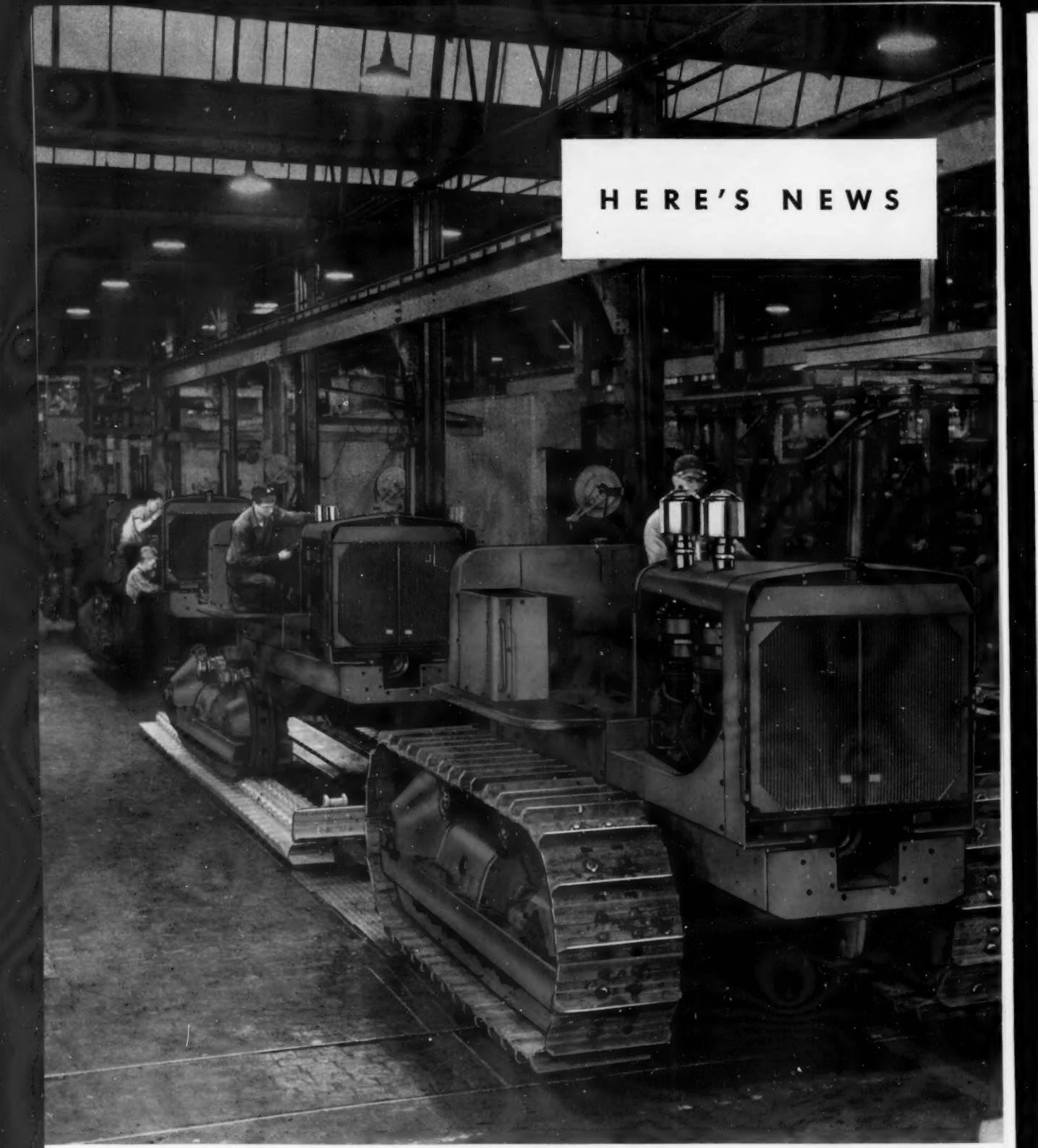
Court states, is controlling in a case with no question of insolvency involved, where the contest is between specific and perfected municipal tax liens for delinquent real estate taxes and water rent and general federal liens for unpaid withholding and unemployment taxes and insurance contributions.

Nontaxable Reorganization.—The Internal Revenue Service has published a ruling to the effect that it will regard as a nontaxable reorganization a rearrangement of the capital stock of a corporation, intended to increase the common stock interest of a younger officer, whereunder it will issue a new second preferred stock in exchange for common stock held by certain older stockholders.

Public Contracts

Letter Contracts.—The Comptroller General has emphasized that the use of letter contracts or letters of intent should be resorted to by the government only under conditions of utmost urgency. In the future, he advises, so-called lump-sum contracts will not be regarded as binding obligations of the government where delayed until the work is in the last stages and the cost limits stipulated have been consistently disregarded and increased by successive amendments after being exceeded. The ruling also informs contracting officers that their failure to procure performance and payment bonds from contractors prior to performance of contracts is contrary to the requirements of the Miller Act.

Contract Settlement Act.—A war contractor on the accrual basis of accounting was upheld by the Court of Claims in contending that income accrued to the contractor in 1949 when its claim was paid rather than in 1945 when its contract was terminated. Only in the later year, the court felt, was there a fixed, determined, and enforceable right to receive a reasonably ascertainable amount.



HERE'S NEWS

They're here now! 28,000-lb. HD-15's with torque converter drive are already rolling off the assembly line.

Allis-Chalmers Powerful HD-15 adds to its big work advantages

**. . . now offers choice of two outstanding drives—
standard transmission with time-saving shift pattern,
or widely accepted hydraulic torque converter drive**

From its introduction, the Allis-Chalmers HD-15 has set new standards in performance and long-life service . . . in a new size class. It combines outstanding strength and balance with plenty of power, plus a simplified, time-saving transmission that gives big work output. In addition, the HD-15 offers remarkable service simplicity, with features like unit assembly and 1,000-hour lubrication intervals for truck wheels, idlers, and support rollers. It has proved itself the kind of tractor required on today's jobs.

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Chalmers in the world's *first* torque converter tractor nine years ago. This modern drive gets more done because it automatically provides the right combination of speed and pull every working minute . . . and hydraulic cushioning assures longer life for both tractor and auxiliary equipment.

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| Tylox Flexible Rubber | Ship Lap Wall Coping | Chimney Pots |
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Construction and the Economy

THE SURVEY of conditions in the construction industry just completed among chapters and directors of The Associated General Contractors of America (page 21), while indicating down trends in some sectors of activity, presents on the whole a picture of a sustained high total volume of construction during 1954.

The industry's pulse is being watched by business, government and labor today more closely than at any other time in history because of the increasing knowledge of its dynamic role in the nation's economy.

It is this awareness that construction accounts for 13 per cent of the gross national product and 15 per cent of total gainful employment that has prompted students of the country's economic condition to study the industry's role carefully during the current business readjustment. Construction has been mentioned many times during the hearings of the Congressional Joint Committee on the Economic Report.

The vast backlog of commercial, institutional and public works construction needs is looked upon as one key to the stimulation of employment and business now and in the future. The tremendous lag between the current construction rate and documented needs of public works is the primary reason why they are listed in the President's "arsenal of weapons" to help maintain economic stability by being accelerated (February *CONSTRUCTOR*).

In his statement at the economic hearings, Federal Reserve Board Chairman William McC. Martin, Jr., while pointing out the favorable factor of rising construction volume, stated:

"Long-run growth in the economy must stem increasingly from private demands. Consumers purchase directly the bulk of the nation's output. In the period ahead as government requirements are reduced, private consumption should increase. Therefore, future growth of private demand depends largely on the willingness and ability of consumers steadily to expand their purchases.

"... There is still a great need for housing as the number of households and the population continue to grow. ... Plant and equipment expenditures of business in postwar years, despite their high levels, have not been markedly different in their relation to total national product from those in earlier years of high level activity. ... In the case of electric power, rapid expansion of demand has maintained strong pressure for investment in new facilities.

"Increased levels of production costs resulting primarily from postwar inflation, together with the rapid development of technology, provide strong incentives for further large business capital expenditures. In many instances, these incentives are strengthened rather than weakened by more competitive markets. Industrial research is daily uncovering new opportunities for business investment.

"We continue to have backlog needs for investment in

commercial, office building, hotel, church, and hospital facilities, and the need for public works—schools, other public facilities, roads and highways—seems insatiable. The problem for the future is mainly how to translate these basic needs into effective market demand."

In another appraisal of the economic outlook, Meyer Kestnbaum, chairman of the Board of Trustees of the Committee for Economic Development, agreed with the President's economic report, both in diagnosis and in policy.

Among reasons listed as discounting any deep depression, Mr. Kestnbaum counted the strong underlying investment demand, including the high rate of construction; the strong financial situation; and the government's "built-in" supports to private spending power, including farm price supports and unemployment compensation.

However, Mr. Kestnbaum recommended three government policies "to get full advantage of the stabilizing and recuperative powers of business in the face of declining economic activity":

First, continued favorable financial conditions for the maintenance and expansion of economic activity, such as easy credit conditions, lower rediscount rates and lowering reserve requirements.

Second, "the automatically stabilizing potentialities of the federal budget should be fully achieved," even if it means a deficit.

Third, preparations should be made "to deal with the possibility that at some time we may encounter a deflationary impact so strong that it threatens to overrun our normal defenses, which are alert business policy, flexible monetary policy and stabilizing budget policy."

The types of action for which we should be prepared, Mr. Kestnbaum stated, include:

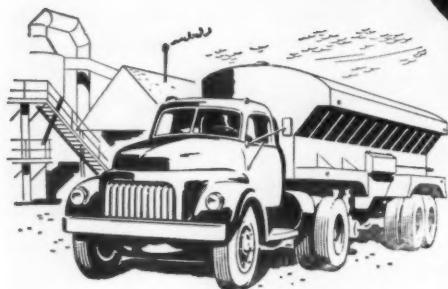
- "Emergency increases of government expenditures, including needed public works.
- "Emergency expansions of government lending and loan guarantee operations, as in the housing field.
- "Emergency tax reductions."

The biggest problem in such measures, he noted, is "walking the tight rope" between too much and too little, and also too early and too late actions.

While there is now, and presumably will continue to be, strong demand for construction, including public works, past experience with "stop-and-go" programs should indicate careful handling of the industry in any economic planning. A past CED study indicated that timing of public works construction might serve to help stabilize the industry, but not the entire economy.

One of the country's real needs now in view of the big backlog of requirements, whether or not there is a recession, is an adequate program of planning needed projects in advance.

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» A HEAVY SPURT in highway construction, a more moderate gain in building construction and a dip in heavy engineering projects are in store for the construction industry during the next six months, according to a nation-wide survey conducted by The Associated General Contractors of America.

Dominating this picture will be the ever-deepening competition. Although government and private sources forecast a 1954 volume only 2 to 4 per cent less than the all-time high of \$46.5 billion achieved last year, the capacity of the industry has expanded so greatly that competition seems bound to increase even if there is an expanding volume of construction.

Factors for Competition

The reasons for this are made clear in the replies to the survey, conducted among the 122 chapters and 82 national directors of the association on the eve of its 35th annual convention in Los Angeles.

Contractors who expanded their organizations under the stimulus of wartime demands and during the unprecedentedly good years that followed are fighting to maintain their organizations on their present scale. Their ranks are swelled by new companies that came into existence during this period and are struggling to stay alive, the contractors reported.

With more contractors doing less work during the next six months it is just simple arithmetic that there will be less work per contractor. Possessed of greater capacity, most firms are ranging far and wide in their search for work. In many cases the lowness of bids, often below engineers' estimates, reflects simply a desire to keep up with a large overhead, it was reported in many cases.

Flexibility Increases

Many replies to the survey state that the lowness of these out-of-state bids is due to a lack of knowledge of local conditions. A growing trend of small contractors to take on bigger jobs was also reported. Home builders, for instance, because of the decline in residential construction, are invading the commercial and heavy construction fields, and building contractors are also picking off heavy engineering projects, the replies stated.

Respondents to the survey said that contractors have not only increased their capacity but also their flexibility. All of it makes, they stated, for in-

Gains in Highway, Building Work Forecast in Latest A.G.C. Survey

- Contractors See Less Heavy Construction
- Increasing Competition Dominating Industry
- Firms More Flexible, Ranging Farther

By M. A. Cautela, Staff Member

creased value to the buyer of construction and further sharpening of contractors' efficiency. The possibility that some will have to reduce the size of their organizations and others will fall by the wayside was seen in many of the replies.

Highway Picture Brightest

• The brightest spot on the industry's horizon is in the field of highway construction. Fully 46 per cent of the replies in this category forecast an increase in this type of work during the next six months. Another 34 per cent said highway construction would remain at the present level, making a total of 80 per cent predicting an increase or the same high level.

• Sixty-one per cent of the respondents said building construction would be either greater or remain at the same high level. Those predicting an increase totaled 35 per cent, those the existing volume, 41 per cent. Thirty-nine per cent saw a decline in this category of construction work between now and August.

• In heavy construction the forecast for a decline was made by 54 per cent of the respondents. Seventeen per cent saw an increase ahead, and 29 per cent looked for it to remain stable.

More School Construction

The strongest trend reported in the survey among specific types of projects was in school construction. Twenty-one per cent said there would be more building of schools. Five per cent reported that hospital construction would be increased, making the figure reporting greater institutional construction 30 per cent when church and other institutional structures are included.

An increase in commercial building was forecast in 13 per cent of the replies, and six per cent saw a larger volume of industrial projects. In public construction, 16 per cent saw a

decline in the six-month period ahead while 7 per cent looked for an increase. Those predicting more private work amounted to 4 per cent.

Regional Trends Cited

Regionally, the survey gave the following picture:

Far West—Heavy construction will be hard hit in this area, it was predicted by 75 per cent of the replies from the states of California, Washington and Oregon and the territory of Alaska. One reply stated that the number of heavy contractors operating in the area had more than doubled since 1945.

An increase or the same high level of highway work was foretold in 77 per cent of the replies, of which 53 per cent were for an increase. Fourteen per cent looked for an expanded building construction market and 43 per cent for a stable market.

Rocky Mountain—Building and highway work to increase, with heavy construction to remain stable. A definite increase in school construction expected and a decline in federal work. Some increase in commercial and residential work.

Southwest—Declines predicted both in building and heavy construction with highway work increasing. A substantial boom in commercial and school construction and a definite decline in residential building. As a result, home builders are bidding on commercial work and going in for heavy construction as well, replies stated. The construction market has been affected by the drop in the agricultural economy. Good weather has enabled contractors to catch up on their work and left them free to bid on more jobs.

Bright Picture

Middle West—Highway construction dominates the picture for this

area. Sixty-five per cent predicted an increase and 29 per cent expected the volume to remain constant. A decline in this category of construction was expected in only 6 per cent of the replies.

An increase or the same high level of building construction was forecast by 71 per cent with 36 per cent for an increase. The heavy construction picture will be spotty with some localities very optimistic and others expecting a definite decline. Over-all, heavy construction is expected to rise. Hospitals, churches, schools and other institutions look very strong, as do commercial, industrial and public building. Somewhat of an increase in defense work and a decline in residential construction.

South—A decline in heavy construction expected by 61 per cent; increases in highway and building construction. Strong points are commercial, school, public, private, and industrial construction. Federal work will decrease, as will residential.

One of the replies will serve as an indication of the expansion of the industry in this region.

"Sixty to 70 per cent of the contractors bidding public jobs of \$500,000 or over have been in business five years or less," said one respondent. "Fifty per cent have been in business three years or less. Their insufficient cost records and pricing experience and anxiety to grow is causing them to bid dangerously low."

Middle Atlantic—Declines in heavy and building work strongly predicted. Highway work to increase. The drop in building construction is expected by fully 83 per cent of the respondents while that in heavy work is reported by 66 per cent.

New England—The strongest optimism prevails here. Heavy increases in all three categories expected. In highway construction all replies were either for an increase (80 per cent) or for the present continued high level (20 per cent). Eighty per cent predicted either an increase or stabilization of heavy work while 67 per cent were of the same opinion in the building field.

Nation-wide on the labor front, 56 per cent said wages would rise, while the remainder looked for a more or less stabilized situation for next six months.

Optimistic Tone Features Economic Hearings

• Decline Expected to Be Mild and Temporary, Experts Say

» THE HEARINGS currently being conducted by the Congressional Joint Committee on the Economic Report for the purpose of diagnosing the country's economic condition and prescribing any necessary corrective measures has produced an unprecedented parade of economists representing government, labor, and diversified fields of business and industry.

While daily newspaper reports of the hearings appear in many respects to be relishing the pro and con predictions of last December, a study of the statements by outstanding business leaders and government officials reveals a significant tone: General agreement, for the most part, with the optimistic outlook of the President's economic report and of responsible business leaders.

Opinions were, for the most part, that the current "readjustment," or "recession," was caused by excess of production over demand last year, resulting in excessive inventories and their consequent contraction, now in process; and that the period of decline will be mild and temporary, with a pickup in the near future bolstered by underlying strength in several factors of the economy.

A panel of non-government economists painted a picture not unlike that forecast for construction this year: That over-all activity probably will be some 5 per cent less by the end of the year than during the peak last spring.

The Committee for Economic Development, which has earned the reputation of being reasonably accurate in its predictions on employment, closely paralleled the President's economic report in its appraisal of the situation and its approach to the problem of the government's policy.

Meyer Kestnbaum, chairman of the CED Board of Trustees, presented three factors for the conclusion that the current inventory readjustment will not precipitate a "deep or persistent depression":

"1. A strong underlying investment demand, as evidenced by business plant and equipment projects, by machinery orders and construction contracts. The decline so far does not seem to have caused a cutback in plans for investment.

"2. A strong financial situation; the banks and other financial institutions

are liquid, business and farm debts are not excessive, and consumers' liquid assets are large.

"3. Strong built-in supports to private spending power, in the form of unemployment compensation, farm price supports and a tax system that takes less out of the private income stream as private incomes decline."

Among dissenters to the Administration's policies were Edwin G. Nourse, former chairman of President Truman's Council of Economic Advisers, and a CIO spokesman who urged emphasis on increased purchasing power rather than investment stimulus.

A.E.D. Holds 35th Convention

More than 2,500 U. S. and Canadian construction equipment distributors and manufacturers, a record number, met in New York City Jan. 31-Feb. 4 for the 35th annual meeting of the Associated Equipment Distributors, which featured a week-long series of conferences and business sessions on building sales and cutting costs.

The five-day program was centered around four morning business sessions, highlighted by the speeches of top business leaders. In addition to these sessions were a special clinic for local association officials, numerous smaller conferences, A.E.D. committee meetings and distributor-manufacturer conferences.

George W. Gagle, president of Machinery and Supplies Co., Kansas City, Mo., was installed as 1954 A.E.D. president at the morning session, Feb. 3. Other officers elected included R. J. Finn, Bode-Finn Co., Cincinnati, executive vice president; S. F. Laskey, Northwestern Equipment, Inc., Fargo, N. D., vice president; L. Miner Doolen, Telford Equipment Co., Lansing, Mich., vice president; and F. J. Fitzpatrick, Parker-Danner Co., Hyde Park, Mass., treasurer. Retiring president was S. John Oechsle, Metalweld, Inc., Philadelphia.



Mr. Gagle

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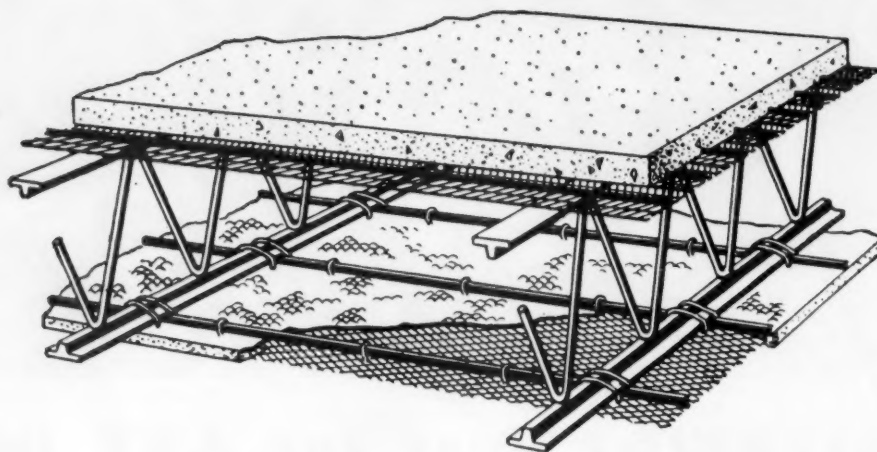
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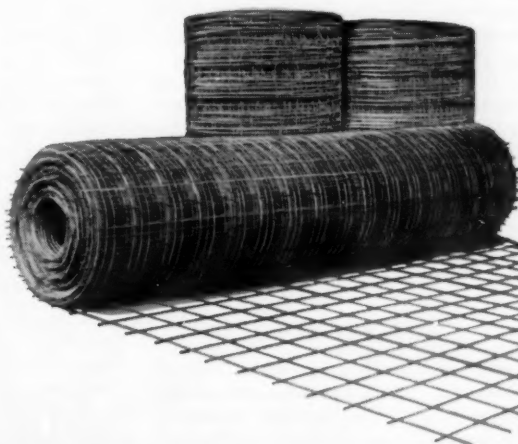
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President's Program Numbers 196 Specific Legislative Aims

- Recommendations Mostly in Hearing Stage
- Bills Detail Administration Housing Plan
- Message Seeks Atomic Energy Use in Peacetime

» TO THE HEAVY work load he had laid out for Congress in a series of earlier messages—containing 184 specific recommendations for legislation—President Eisenhower added other major requests in his message on atomic energy Feb. 17. These brought his total of legislative recommendations to 196.

For the most part the President's program remained in the committee hearing stage last month, and much of it has not yet reached that point in the legislative process.

Hearings have been completed on some major recommendations in one house or the other, and a few bills have been passed by either the House or the Senate.

In view of the fact that this is an election year, this session of Congress will be relatively short. Senate Majority Leader Knowland has said he is aiming for adjournment by July 1 and hopes the session will wind up not later than July 15. Consequently many observers think that much of the President's program will not be acted on before Congress adjourns.

Senate Passes Seaway Bill

The Senate has passed a bill to carry out one of the Administration's major proposals of special interest to the construction industry—authorization of U. S. participation in the St. Lawrence Seaway. The House Committee on Public Works has approved the bill passed by the Senate, authorizing \$105 million for the seaway, and a House vote on the measure is scheduled for this month.

Another bill of special interest to the construction industry, to permit the Air Force to establish its own service academy, has been passed by the House and is pending in the Senate. The ultimate cost of the academy, the site for which has not been selected, will be about \$175 million.

Tax Draft Due This Month

On taxation, the House Ways and Means Committee continues work on

revisions in the revenue laws, with the final draft of tax legislation expected some time this month.

Controversial proposals for revisions in the Taft-Hartley Act have been studied by both Senate and House Labor Committees. The Senate committee completed its hearings on Taft-Hartley amendments last month, preparatory to drafting a bill and a report based on its entire study of changes in labor-management legislation which began a year ago. The House Labor Committee late last month started work in closed sessions on drafting Taft-Hartley amendments.

The President's recommendations for expansion of the social security system are under consideration by the House Ways and Means Committee. Administration proposals include increasing the social security tax and expanding the system's coverage to about 10,000,000 more persons, including self-employed farmers, additional farm and domestic workers, self-employed professional workers, others.

Housing Plans Spelled Out

In the housing field, the House Banking Committee planned to begin hearings the first of this month on the President's program for low-cost housing and liberalized mortgage insurance. Administration plans, designed to help all Americans live in better homes, include:

- A special "experimental" plan to help low-income families buy homes costing up to \$8,000 for as little as \$200 down payment, with the government guaranteeing 100 per cent of a 40-year mortgage. Such homes would be restricted to families displaced by slum clearance projects.

- Liberalization of present Federal Housing Administration mortgage terms and authorization to increase allowable FHA mortgage coverage to \$20,000. The President seeks discretionary power to cut down-payment requirements on all FHA-insured homes to 5 per cent and increase the mortgage terms to 30 years.

- Authorization of \$2 billion FHA mortgage insurance, of which \$1.5 billion would be made available immediately, with the President empowered to add the remaining \$500 million if needed. This authorization was requested "to permit FHA to operate at last year's level of activity" when the home building industry constructed 1,100,000 homes.

- Provision of \$5 million for cities and towns to conduct experiments on new and improved techniques for preventing and eliminating slums. The plan also seeks authority for loans up to \$700 million to cities and towns to carry out slum prevention programs, and grants up to \$250 million to municipalities for this work.

These and other details of the Administration housing program were presented last month in identical bills introduced by Chairman Jesse Wolcott (Mich.) of the House Banking Committee and Chairman Homer E. Capehart (Ind.) of the Senate Banking Committee.

Atomic Energy Development

The President's message recommending amendments to the Atomic Energy Act calls for the exchange of certain information on atomic weapons with friendly nations, and the development of peacetime potentials of atomic energy with the collaboration of private enterprise, among other proposals.

Schools and Hospitals

A number of bills have been introduced to provide federal aid to the states for the construction of public schools and hospitals. Two bills to amend the Hospital Survey and Construction Act are receiving consideration by the House Committee on Interstate and Foreign Commerce. No action has been taken as yet on the school construction bills.

Advance Planning of Public Works

One bill has been introduced in the Senate and two in the House providing for the establishment of an effective program for the advance planning of needed public works. The President in his budget message emphasized the importance of planning well in advance so that public works projects would be available for undertaking when economic conditions dictate. No committee action on these measures has as yet been taken.

» **HEARINGS** before the House Committee on Public Works Feb. 15-17 developed preponderant support of the McGregor federal-aid highway bill (H.R. 7818), announced as the Administration bill for an expanded road construction program.

Introduced by Rep. J. Harry McGregor (R., Ohio), chairman of the House Roads subcommittee, the measure would authorize \$800 million in federal-aid appropriations for each of the two fiscal years beginning July 1, 1955 and 1956, as compared with present authorization of \$575 million yearly.

Identical Bills Introduced

An identical bill has been introduced in the Senate for the Administration by Senator Edward Martin (R., Pa.).

Testimony on behalf of The Associated General Contractors of America was presented to the House committee Feb. 16 by George C. Koss, Koss Construction Co., Des Moines, Iowa, incoming vice president of A.G.C.

Mr. Koss said highway contractors would agree that the proposed authorizations are "the barest minimums necessary if we are to make any progress in developing a more adequate highway system."

Contractors will agree, he added, that in the long run "the cost to the nation will be less if we take prompt action in starting on the construction program necessary for an adequate highway system than if we delay while existing highways are further pounded to pieces by the steadily increasing volume of traffic."

Noting that the McGregor bill's authorizations approach the revenues from federal gasoline taxes, now running about \$910 million a year, Mr. Koss said:

"Our association by resolution has recommended that the federal government assume its proper responsibility for the nation's highway needs 'by increasing federal-aid returns to the states of not less than the total amount of funds collected in taxes from highway users.' We have consistently pointed out the dangers of diversion of highway funds to other purposes by any unit of government."

Mr. Koss assured the committee that the industry "has the capacity to carry out an expanded highway construction program promptly, efficiently, and economically." The industry has "ample resources of

McGregor Highway Bill Wins Strong Support

• Koss Testifies at House Committee Hearings for A.G.C.

manpower, materials and equipment, under the supervisory skill of experienced and responsible contractors, to perform all of the construction required by this program on schedule and with increasing efficiency," he added.

Competition between contractors has been steadily increasing and will continue exceedingly keen in the future, he said.

Other witnesses testifying favorably on the bill included Alfred E. Johnson, chief engineer of the Arkansas State Highway Department and

president of the American Association of State Highway Officials; Mayor William B. Hartsfield of Atlanta, Ga., past president of the American Municipal Association, and Clinton S. Reynolds, chairman of the American Automobile Association Highway Committee.

The Senate Committee on Public Works held hearings on highway legislation Feb. 26 and March 1 and 3. It invited testimony from the A.G.C. and agreed to hold the record of hearings open for a statement from the association.

Seek Limit on TVA Force Account Work

» **A.G.C. PRESIDENT C. P. STREET** appeared before the Subcommittee on Independent Offices of the House Appropriations Committee Feb. 16 to request an amendment to the Tennessee Valley Authority appropriation bill limiting the amount that may be expended by TVA in construction operations by force account.

Mr. Street pointed out to the subcommittee that the adoption of the competitive contract method by TVA would be in conformity with the policy which Congress has adopted concerning the operations of other government agencies.

In view of the attitude of TVA toward use of the contract method of construction, he said, legislation is necessary to correct the condition. Ever since the inception of TVA, it has been impossible for general contractors to obtain sympathetic consideration from the agency, he told the subcommittee.

"TVA has constructed numerous dams, hydroelectric plants, extensive power distribution facilities, locks, canals, and other facilities for navigation, as well as many other structures for a variety of uses," Mr. Street continued. "These various projects represent several hundreds of millions of dollars. TVA has also acquired by purchase other structures and facilities and has built many buildings, including some housing, thus adding additional millions to its construction investment."

"Practically all of the foregoing TVA construction, with the exception

of a very few specialized operations, has been performed by force account. Competitive bids by competent construction contractors have not been invited or considered on any project of consequence. This procedure differs materially from the practices followed by other government agencies and by private enterprise.

"The effect of such large force account operations in an area by one government agency is to set new patterns in the purchase of materials and in establishment of wage rates and working conditions in conflict with the normal standards established by private enterprise contractors operating under competition in the area."

Mr. Street reminded the subcommittee of the "abundant evidence" received by Congressional appropriations committees of the advantage resulting from the award of construction contracts to the lowest responsible bidders. Why, he asked, has TVA been an exception to the practice of performing construction work by contract?

He offered the following suggested amendment to the appropriation bill:

"No part of any construction appropriation for the Tennessee Valley Authority contained in this act shall be available for construction work by force account, or on a hired-labor basis, except for management and operation, maintenance and repairs, engineering and supervision, routine minor construction work, or in case of emergencies, local in character, so declared by the Board of Directors of the Tennessee Valley Authority."



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LEGISLATION

Judicial Review Bill Approved

Legislation to restore the right of judicial review of disputes arising from public works and other federal contracts (S. 24), already passed by the Senate, was approved Feb. 25 by a House Judiciary subcommittee, with some revisions in language.

The bill now goes to the full House Judiciary Committee for action, which was expected early this month.

The revisions in language made by the subcommittee were proposed by the Comptroller General. If the measure is passed by the House in this form, it will necessitate a conference committee to adjust differences between the two versions.

The original bill was introduced to correct the situation resulting from the Supreme Court's decision in the *Wunderlich Case*, Nov. 26, 1951. The decision limited the right of appeal from administrative rulings by contracting officers and department heads in disputes arising from federal contracts to cases where positive fraud is alleged and proved. It had the effect of denying the right of appeal in federal contract disputes which contractors had previously been able to exercise.

Following the *Wunderlich* decision, The Associated General Contractors of America took the lead in recommending to Congress the enactment of remedial legislation, on the ground that the right of judicial review is basic to equity and justice in contractual relationships.

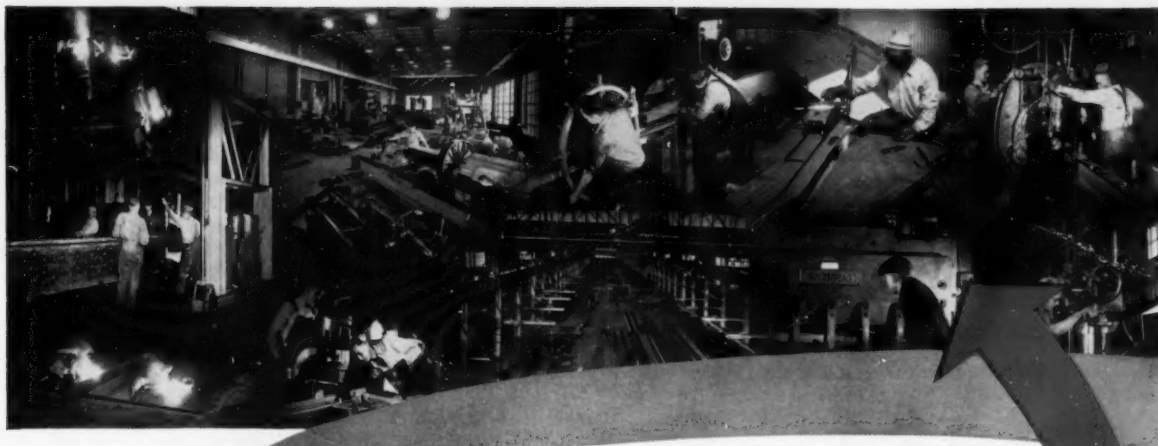
Rule Denied Subcontractor Bill

The House Rules Committee on Feb. 17 denied the request of Rep. Edgar A. Jonas (R., Ill.) for a special rule to bring to the floor the subcontractor bill (H.R. 1825), of which he is the author.

The committee met at the request of Congressman Jonas to consider granting a rule for the bill, and after voting against it, adjourned with respect to this matter subject to the call of the chairman.

The A.G.C. opposes the bill to impose federal regulations on the bidding and award of subcontracts on federal projects, which it considers unworkable and unnecessary.

The companion bill, S. 848, was reported to the Senate last session. Objections when it came up on calendar calls prevented consideration.



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Recent Labor Cases

Federal and State Courts, NLRB Hand Down Important Decisions

- State-Federal Jurisdiction, Right-to-Work Laws
- Supreme Court Clarifies T-H Discrimination

By William E. Dunn

Manager, Labor Relations, The Associated General Contractors of America

» MANY important decisions directly or indirectly affecting construction have recently been rendered by the U. S. Supreme Court, the federal and state courts, and by the National Labor Relations Board. These decisions involve discrimination in hire and tenure of employment on the basis of union membership, state right-to-work laws, and conflicts between state and federal jurisdiction.

State v. Federal Jurisdiction

In line with its decision in the *Garner Case* (January *CONSTRUCTOR*, p. 27) the U. S. Supreme Court reversed the Alabama Supreme Court which had granted an injunction against peaceful picketing on a construction project. While interstate commerce was affected to some extent, the employer claimed the federal law did not apply because his business did not fall within the rule-of-thumb jurisdictional yardsticks laid down by the NLRB. (*Building Trades v. Kinard Construction Co.*, 24 Labor Cases 68,086.)

It will be recalled that in the *Garner Case*, the U. S. Supreme Court took a picketing case away from the Pennsylvania Supreme Court because the picketing was for a purpose which the court found to be regulated by the Taft-Hartley Act.

In spite of the *Garner* decision, which gives practically exclusive jurisdiction to the NLRB on labor matters not involving union security, the Supreme Court of Missouri has since issued an injunction against peaceful picketing. In this case, the purpose of the picketing was to force the employer to award contracts for the installation of machinery to contractors who would employ machinists, members of the picketing union. Referring to an NLRB decision in the case holding that the conduct did not violate the Taft-Hartley Act, the State Court ruled that therefore the federal

law did not oust the state's jurisdiction in the matter. (*Anheuser-Busch, Inc. v. Weber*, 24 Labor Cases 68,137.)

Right-to-Work Laws

A state court of Arkansas has recently granted an injunction against peaceful picketing for a union shop, which is an illegal objective under the Arkansas right-to-work law. (*Machinists v. Goff-McNair Motor Co.*, 24 Labor Cases 68,135.)

A state court of Texas has recently upheld the state's right-to-work law which is in conflict with the union-shop provisions of the National Railway Labor Act. The state court suggested these provisions of the Railway Act were unconstitutional. Unlike the Taft-Hartley Act, the Railway Act does not grant the states exclusive jurisdiction to regulate union security matters. (*Sandsberry v. Santa Fe*, 24 Labor Cases 68,128.)

Shortly prior to the Texas court ruling on the National Railway Act, a state court of Nebraska made a similar ruling on this act. The Nebraska court ruled that Congress does not have exclusive jurisdiction over union-security matters, and that the Railway Labor Act did not require a union shop, but simply permitted it as far as the federal law was concerned. (*Hanson v. Union Pacific*, 24 Labor Cases 68,095.)

Discrimination Because of Union Membership or Non-membership

A collective bargaining agreement that provides for orders of preference in hiring is illegal, says the NLRB. In this case, a boilermakers' agreement provided hiring preference in this order: first, members in good standing with the union; second, members not in good standing; and lastly, non-union applicants. (*NLRB v. Boilermakers Local and Harbor Ship Maintenance Co.*, 107 NLRB 212.)

The following of a discriminatory hiring arrangement, even without any formal agreement, may subject the employer or union to back-pay liability, says the NLRB. In this case, the NLRB ordered a carpenters local union to pay back wages to six applicants for employment as millwrights. The union objected to their employment on the grounds the applicants were not members of the Carpenter's Union. The board found that there was an arrangement between the employers association and the union whereby only members of the Carpenters' Union were employed as millwrights. (*NLRB v. South Texas AGC and Carpenters Union*, 107 NLRB 190.)

"First Opportunity" Agreement Held Discriminatory

Where an agreement provides that a union shall have the "first opportunity" to supply workmen required by contractors, provided contractors may get workers elsewhere if the union fails to supply the need, such agreement violates the Taft-Hartley Act if it is used to exclude an applicant from employment because he is a member of another union. This was the ruling of a Federal Court of Appeals in *NLRB v. Auchter Company* (24 Labor Cases 68,078).

In this case, the job applicant was a member of both the Carpenters Union and the Machinists Union. The Carpenters Union, which had the "first opportunity" agreement, refused to clear him for employment because the Carpenters' constitution condemns "dual unionism." The employer refused to hire the applicant without a union referral.

"When a labor organization undertakes to supply an employer with workmen, it violates the act, unless it carries out this undertaking on a nondiscriminatory basis," says the court. The court further ruled that the "first opportunity" clause of the contract, as interpreted and administered by the parties, constituted an invalid union-security agreement which amounted to a closed-shop arrangement. By continuing this contract in force and effect, the employer and the employers' association violated the Taft-Hartley Act, as did the union, according to the decision of the court.

Supreme Court Clarifies Discrimination Provisions of Taft-Hartley

In a series of three recent decisions, the U. S. Supreme Court settled some

long-standing issues on what constitutes employer discrimination to encourage or discourage the employee's membership in a union, and on what constitutes union coercion to cause employer discrimination.

In *NLRB v. Teamsters Union* (25 Labor Cases 68,111), a member of the Teamsters Union was stripped of his seniority rights upon insistence of the union because of his alleged delinquency in the payment of union dues.

As a result, he lost work because work assignments were governed by seniority. While there was no union-security agreement in this case, the seniority arrangement had been agreed to by union and employer.

The lower court found no discrimination to encourage union membership, as banned by the Taft-Hartley Act, since the employee was already a member of the union. But the U. S. Supreme Court ruled that this was a case of discriminating to encourage the employee to remain a member in good standing, and that was prohibited by the Taft-Hartley Act.

In *NLRB v. Radio Officers' Union* (25 Labor Cases 68,111), a member of that union was refused available work on the union's insistence. The employer was going on the basis of a pre-Taft-Hartley-Act agreement that he would hire only men who were in good standing in the union. The union refused to give clearance for the employee due to his alleged breach of a union rule. The Supreme Court held the union guilty of causing the employer to discriminate for the purpose of encouraging membership in good standing in the union. The employer was not involved in the complaint.

In *NLRB v. Gaynor News* (25 Labor Cases 68,111), the employer granted retroactive wage increases and vacation payments to employees who were members of the Newspaper Deliverers' Union. He did not grant such benefits to non-union employees, and claimed that he had not agreed to make such payments to non-union employees. It was further noted that only the sons of union members could join the Newspaper Deliverers' Union, and therefore it was argued that discrimination to encourage an ineligible employee to join this union could not have actually occurred.

However, the Supreme Court held that it was not necessary to prove discrimination to encourage or discourage union membership by direct

evidence. It said that such discrimination could be inferred, and, in this case, observed that the natural result of the unequal wage treatment was the encouragement of union membership.

Discrimination Rules Established by Supreme Court Decisions

In the *Teamsters*, *Radio Officers* and *Gaynor* decisions, noted above, the Supreme Court established rules on discrimination to encourage or discourage union activity, which are summarized as follows:

- An employer may not discriminate to encourage or discourage union activities of any kind, with the exception of the payment of reasonable union fees and dues under a legal union-security agreement.
- An employer may discriminate for other purposes than encouraging or discouraging union activity, however. But the NLRB and the courts may presume that the employer is motivated by the unlawful purpose of encouraging or discouraging union activity if such encouragement or discouragement is the natural foreseeable

consequence of his discriminatory conduct.

- The employee's reaction to the discriminatory conduct of the employer need not be proved. The fact of encouraging or discouraging the employee in union activities may be reasonably inferred from employer conduct that would have a natural tendency to produce that effect in the employees.

Discrimination Proceedings May Be Against Union Alone

- A NLRB proceeding may be made against a union causing the employer to discriminate illegally, without joining the employer in the suit.
- A union causing illegal employer discrimination may be adjudged guilty, while the employer may not be found guilty.
- A union may be required to make back payments of wages lost due to illegal discrimination which it caused, while the employer involved is not required to make such payments.

Only Signatory To Agreement Can Sue Under Taft-Hartley

If a member wishes to sue under an agreement negotiated by his association in a federal court under provisions of the Taft-Hartley Act, he must be a signatory to such agreement. That rule was recently laid down by a federal district court in *Ketcher v. Sheet Metal Workers Association* (24 Labor Cases 68,039).

In this case, an employers' association made an agreement with the Sheet Metal Workers Union in which the union agreed to furnish men. A member of the employers' association brought suit in a federal court under Section 301 of the Taft-Hartley Act, for damages against the union for failure to furnish men as agreed.

The court dismissed the case, as far as the suit on the agreement was concerned, on the basis that the employer had not signed the agreement.

This case, however, did not involve in any way suing on the contract in a state court, or suing in a federal court under some other authority than the Taft-Hartley Act.

More Miscellany—A gratuitous remark by an NLRB trial examiner that "both unions and employers in the construction industry view our orders as a mere business expense and inconvenience," was rejected by the Board. (In the matter of *McGraw Construction Co., et al*, 107 NLRB 210.)

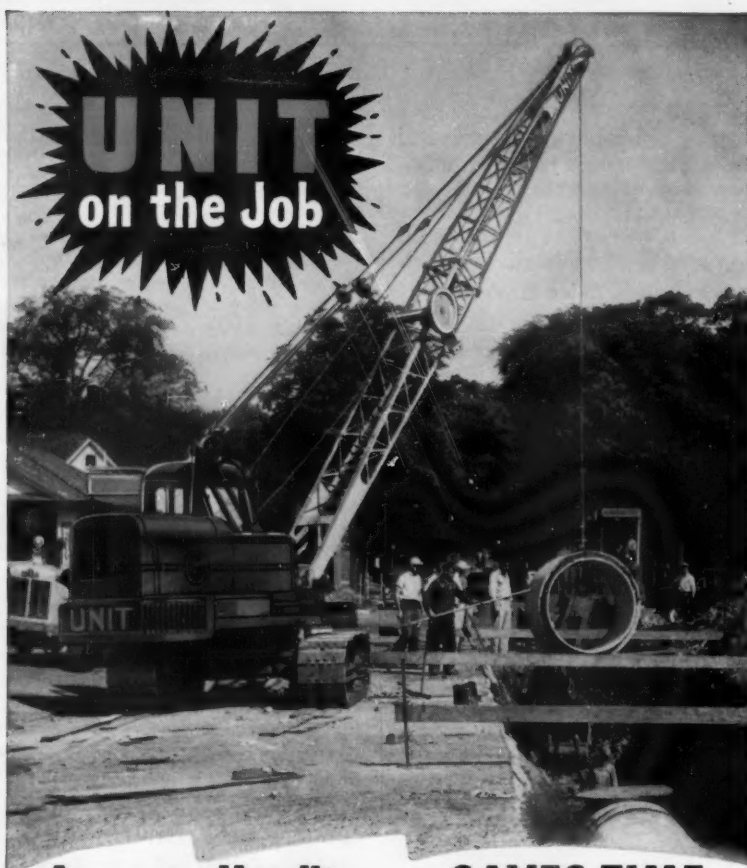
Boss Can't Fire a Worker Who Calls Him Liar, But—

The National Labor Relations Board held that an employer violated the Taft-Hartley Act by firing a worker who called him a liar in a letter written on behalf of a union during the heat of an election campaign, while in another case a court approved the firing of an employee who used stronger language.

In the former case the board said the employee's "use of disrespectful epithets was evoked in part by equally strong criticism of the union by the employer." (In the matter of *Blue Bell, Inc.*, 107 NLRB 118.)

In the latter case the company manager stated: "I discharged him then because he called me a (s.o.b.).* I would fire anybody who called me a (s.o.b.).* I did not fire him because he was working for the union." Although the NLRB held that the employee was discharged for union activity, the reviewing court accepted the employer's explanation. (*Farmers Cooperative Co. v. NLRB*, 24 Labor Cases 67,989.)

*Not abbreviated in the case proceedings.



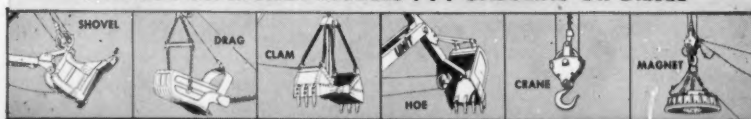
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LABOR RELATIONS

Taft-Hartley Act Hearings

The Senate Labor Committee ended hearings Feb. 9 on Taft-Hartley Act amendments and was expected to begin executive sessions early this month to draft a committee bill and a report.

The committee heard testimony on President Eisenhower's recommendations for 18 revisions in the law. The more controversial changes proposed by the President include relaxation of prohibitions against secondary boycotts, protection of striking unions against loss of representation rights, authorization of stricter union security in certain industries, and provision for government-conducted strike votes.

Committee Chairman H. Alexander Smith (R., N. J.) said testimony indicated that major labor and employer groups prefer keeping the law as it is to accepting the President's recommendations. He described the strike vote proposal as in "such a nebulous state" that a study of alternatives is necessary.

The House Labor Committee met in closed session Feb. 9 to study the President's recommendations, and on Feb. 17 voted, 18 to 10, against a motion by Rep. Cleveland M. Bailey (D., W. Va.) to put off consideration of Taft-Hartley amendments for the rest of this session. The committee agreed to start work Feb. 24, behind closed doors, on proposed amendments.

Beeson Confirmed for NLRB

The Senate confirmed the nomination of Albert C. Beeson, San Jose, Calif., for a one-year term as member of the National Labor Relations Board by a roll-call vote of 45 to 42 Feb. 18. Three Democrats voted with the majority, and one Republican and Independent Senator Wayne Morse (Ore.) with the minority. Mr. Beeson, the third member named by President Eisenhower, gives the board its first Republican-appointed majority in its 18-year history.

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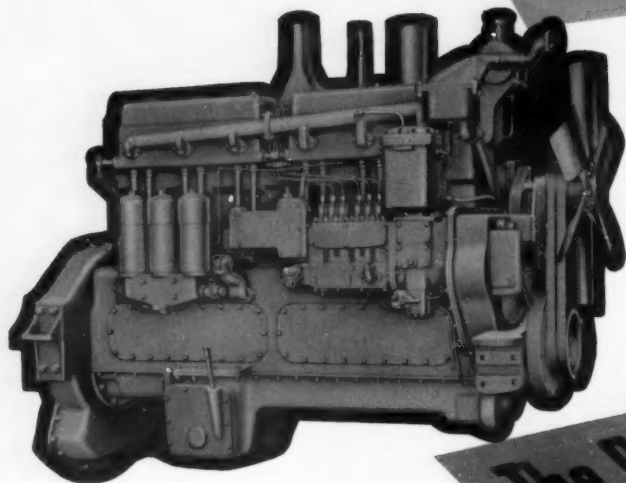
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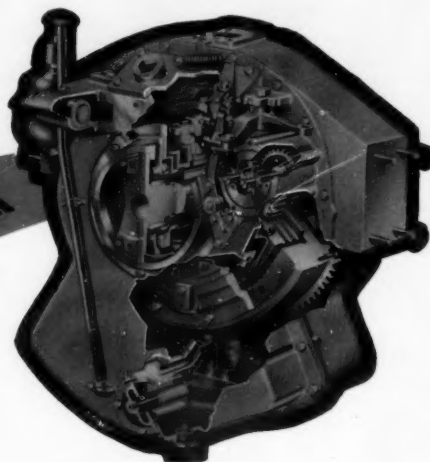
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Bricklayer Trainee Standards to Be Revised

- A.G.C. and Others Named at Miami to Propose Changes

National standards for apprentice bricklayers are due for a change.

The National Joint Bricklayers Apprenticeship Committee, at its Jan. 26 meeting at Miami Beach, authorized The Associated General Contractors of America to work in cooperation with the Structural Clay Products Institute and the Bureau of Apprenticeship in developing a revised draft of the standards which were last brought up to date in 1945.

Items to be considered for revision include registration procedures, composition and operation of the local joint apprenticeship committees, work experience schedules, classroom instruction, apprentice records, and the apprenticeship agreement form. After the revised draft is prepared, the national committee will review it for consideration and approval.

Considered by the committee was a proposal that "refresher courses" be made available to journeymen bricklayers to improve their skills. Members stressed importance of giving these workers a broader knowledge of the problems and work of other skilled craftsmen such as carpenters, ironworkers and the like.

Committee Chairman J. D. Marshall, executive director of the national A.G.C., Washington, D. C., called for a new approach to apprenticeship which would arouse and maintain further interest of employers, unions and apprentices.

W. F. Patterson, director of the Bureau of Apprenticeship, told the committee that the average age of new apprentices is too high, and that the industry should strive to begin training youths just out of high school.

Committee members attending included Thomas F. Murphy, Brotherhood of Masons and Plasterers International Union, Washington, treasurer; Frank J. Rooney, Miami building contractor, A.G.C. representative; Mr. Marshall; and W. A. Snow, national A.G.C. staff, Washington, D. C. Rudolph W. Weitz, The Weitz Co., Inc., Des Moines, resigned from the committee when he recently became director of maintenance in the Defense Department.

Guests at the meeting were Mr. Patterson; W. F. Roark, director, mason relations department, S.C.P.I.; and William P. Huffstetler, Bureau of Apprenticeship, Miami.

First Cement Finishers' School Sets Pace

- Class Sponsored by A.G.C. Chapter and Masons' Local

» THE Cincinnati cement finishers' school, established in 1952 under the joint sponsorship of the Cincinnati Chapter, A.G.C., and the Cement Masons Union, Local 524, is an established success.

Begun in September of that year, the school was the first recognized one of its kind in the country. Now other cities are forming similar schools patterned after this one.

Today there are 28 regular apprentices enrolled in the Ohio school with a fluctuating number of journeymen who take courses from time to time.

The course given to the apprentices covers the standard 144 hours of work per year for four years. Four hours of classes are held each Saturday morning during the regular school year. It was decided to hold the classes on Saturday rather than on evenings following a full-day's work

when attendance is usually poor.

Cooperating with the union and the A.G.C. chapter in running the school is the local Portland Cement Association, the Department of Labor's Bureau of Apprenticeship and the Cincinnati Board of Education.

The P.C.A., which programmed the course and offers technical information of the quality of cement specifications, also supplies an instructor for certain subjects of the class.

In selecting apprentices for enrollment in the school, an intelligence test was given to all applicants. To those who passed this test an aptitude test was given to determine if they would make good cement finishers. Only trainees who passed both tests were enrolled for classes.

The first two hours each Saturday cover blueprint reading and layout

(Continued on page 38)

HOW TO HANDLE WET JOBS

#25 of a series

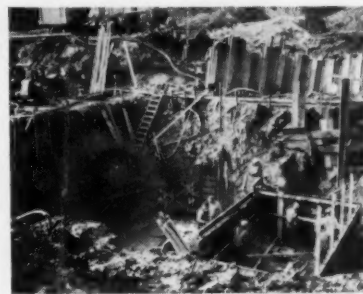
SEWAGE TREATMENT PLANT

Valparaiso, Indiana

Contractor: C & C Construction Co.



BOTTOM UNSTABLE due to quick-sand below subgrade. Photo shows collapse of steel sheet piling in this deep excavation for a Lift Station.



WELLPOINT SYSTEM—in new nearby site—solves problem perfectly as water is lowered the required 21 ft and digging speeds ahead by economical open-cut method.

THE soil mixture — clay, silt and fine sand — didn't make life any easier for the Griffin engineers, especially since subgrade, as noted, contained gravel and sand under artesian pressure. The results indicate efficiency of the planning and installation of system.



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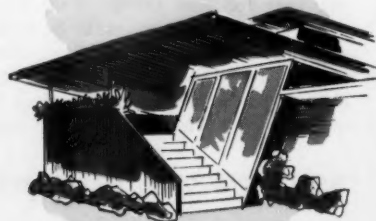
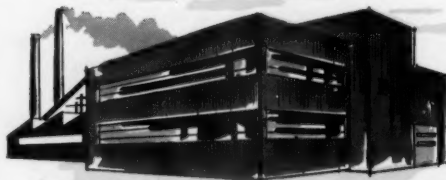
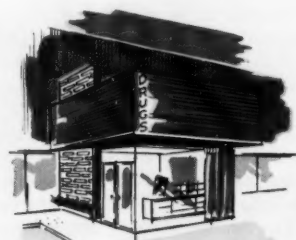
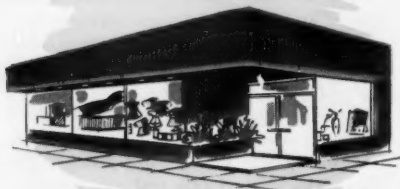
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SUNSET RED

VELVET BLACK

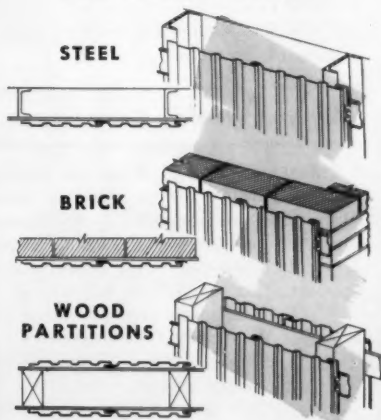
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People avoid this store. It just doesn't look good outside, so they don't expect to find much inside.



how Zourite works



Application of Zourite to steel, masonry or wood construction is quick and simple with the patented Anchor Clip and Zourite Furring Channel spaced 24" O.C. It's lightweight and is easily cut on the job, or shop fabricated. Zourite is made of .050 thick aluminum and is available in 4 widths from 2 1/8" to 8 1/2", and there are 9 trim members to meet all corner and edge conditions. Phone, wire or write now for additional technical information. List of sales offices below.

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APPRENTICE TRAINING

(Continued from page 35)

work, and are taught by the local trade school. The next two hours are used alternately by the P.C.A. for lectures and laboratory work and by the contractors for practical demonstrations. Journeymen are furnished by the contractors and union to instruct this portion of the class.

Federal funds have been made available to the school by the Bureau of Apprenticeship.

At the end of the first full year all persons concerned with the school feel that it has proven successful, and is really just beginning to roll.

Apprentices to Compete

The Sixth Annual National Brickmason Apprentice Competition, sponsored by the Bricklayers, Masons and Plasterers International Union, AFL, will be held in Los Angeles, April 1-6.

Harry C. Bates, union president, announced that the national finals will be held as part of the Union Industries Exposition in the city's Pan-Pacific Auditorium. The winner of the finals will be crowned national champion and will receive a \$500 cash prize. Runner-ups will also get prizes.

All of the apprentices selected to compete in Los Angeles are state and local champions in their own right, having won their way into the finals. Qualifications call for the apprentice to be registered and to have less than two years training.

Many of the local contests were promoted by representatives of The Associated General Contractors of America and the Mason Contractors Association of America.

Apprenticeship Councilmen

Officials of A.G.C. firms are taking an increasingly active part in state apprenticeship programs by representing the association on various state apprenticeship councils. Some recent appointments of A.G.C. officials are:

W. E. Naumann, vice president of the M. M. Sundt Construction Co., Tucson, chairman of the Arizona State Apprenticeship Council.

Heinrich Weitz, secretary-treasurer of The Weitz Co., Inc., Des Moines, member of the Iowa Apprenticeship Council.

W. A. Lundgren, J. A. Lundgren and Son, Topeka, member of the Kansas State Apprenticeship Council.



Stockpiles coal, sand, aggregate. Has traction and flotation to work right up on the pile.



Excavates, fills, levels. Compact — for work in limited areas.



Backfills ditches, packs and levels ground with 16,200 lb. weight.



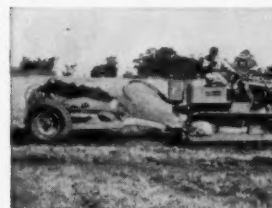
Cleans up rubble with one-cu. yd. tractor-width bucket.



Lifts material where needed. Saves manpower and need for other equipment.



Does sanitary fill work — digs, fills, covers, levels.



Does drawbar work scraping . . . hauling.



Landscapes, grades or slopes lawn areas around building projects.

TEN QUICK-CHANGE ATTACHMENTS ADD TO HD-5G VERSATILITY

| | |
|-----------------------|------------|
| Bulldozer | Trench Hoe |
| Narrow Bucket | Lift Fork |
| Rock Bucket | Tine Fork |
| Crane Hook | Rock Fork |
| Light Material Bucket | Ripper |

ALLIS-CHALMERS HD-5G Always Busy... because it does so many jobs so well!

Busy equipment is profitable equipment. And thousands of owners are learning every day the year around that there's no more profitable machine on their jobs than the one-yard Allis-Chalmers HD-5G Tractor Shovel.



Loads sand, dirt, snow — any material to dumping height of 9 ft., 1/4 in.

Larger size Allis-Chalmers tractors with shovels and other quick-change attachments offer the same wide utility, the same outstanding performing ability as the popular HD-5G. Choose the one that fits your needs.

| 1-YD. HD-5G | 2-YD. HD-9G | 3-YD. HD-15G | 4-YD. HD-20G |
|-----------------------------------|----------------------------------|----------------------------------|--|
| 40.26 drawbar hp. | 72 drawbar hp. | 109 drawbar hp. | 175 net engine hp. |
| Dumping height* 9 ft., 1/4 in. | Dumping height* 11 ft., 4 in. | Dumping height* 12 ft., 8 in. | Torque Converter Drive Dumping height* 13 ft., 5 in. |

*Height of bucket hinge

ALLIS-CHALMERS

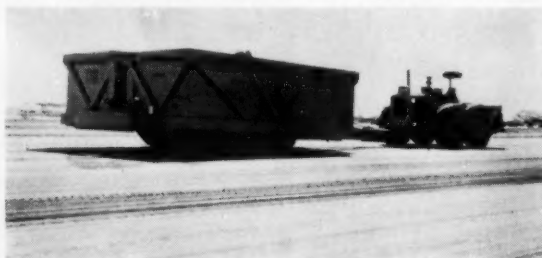
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.

Pictures of the month . . . by LeTourneau-Westinghouse . . .

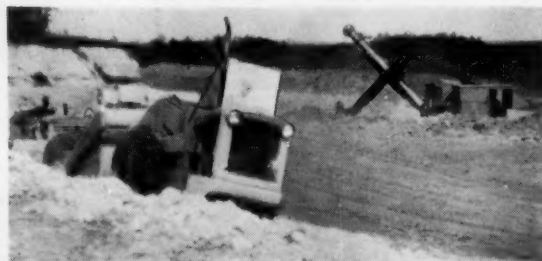


Haul over roads or open country — Four 35 mph C Tournapulls help speed dirtmoving for J. F. Fitzgerald Company on cloverleaf construction for the Boston-Fall River Expressway. 30° oscillating pivot (big picture) permits fast haul over rough ground without stresses and strains between prime-mover and

scraper. Low-pressure tires let rigs drive over pavement without damage to surface (small picture). Fitzgerald gets additional value from his Tournapull prime-movers by interchanging the 16-yd scrapers with 18-yd bottom dumps. All trailing units use same tires, wheels, brake assemblies . . . thus reduce total machine investment.



Plenty of power — 186 hp Tournatractor develops plenty of drawbar pull to tow 200-ton rubber-tired roller. Designed and built by Shovel Supply Co., Dallas, compactor rolls new runway in Texas for heavy jet bombers and big transports. With low-pressure rubber tires on both roller and tractor, operator can cross runways, ramps, and aprons without damage to concrete.



Haul where trucks can't — When grades at their limestone pit near Ames, Iowa, got too steep for loaded 5-ton trucks, Ray Cook Construction Co drove in two 9-ton LeTourneau-Westinghouse rear-dumps. These units (with their high ratio of hp to wt) haul 9 yds of shale-clay overburden per load . . . complete 1250 ft cycles every 5½ minutes up same grades that stopped trucks.

Strips 66 pay yds per hr — Georgia Lime Rock Company works this D Tournapull 12 months a year to strip 3 to 30 ft of low-grade Fuller's earth. Because of its speed, one-man "D" alone uncovers enough lime rock to keep the plant busy. In typical operation, "D" loads 5½ bank yds in 25 seconds. Output averages 66 to 71 bank yds hourly over 1800 ft cycles.

... with performance reports from around the world



In hilly country — R. A. Farish, on 85,000 yd housing job south of San Francisco, takes advantage of downhill loading to heap 13 pay yds in his C Tournapull. On 1100' cycles, "C's" instant-shift transmission enables operator to quickly select proper gear for steep grades. Four-wheel brakes provide ample safety margin.



Effective three ways — Tournapull rear-dumps haul, doze and compact up to 500 tons of coal a day in this stockpiling yard in Malajor, India. Calcutta Electrical Supply Corporation, Ltd is using 2 of these 9-ton units to eliminate hand-labor problems at their power station. Totally inexperienced operators learned how to use the "push-button" controls within a few hours.



Through mud and rain — J. B. Evans Contracting Company, Quitman, Mississippi, is using D Tournapulls to relocate 1.2 miles of U.S. Hwy 90 near Bay St. Louis, Mississippi. During a steady drizzle of rain, units kept moving in and out of soggy borrow pit, over soft wet fills, without pusher help. Complete 11,000' cycles took only 7 minutes 50 seconds.



Turns in 27 ft width — Because of Tournapull maneuverability, tight quarters didn't slow this job at all. Hugh Boyle & Sons' 2 C Tournapulls turned around easily, non-stop on this 27 ft street in Washington, Illinois. Removing hard-packed clay

and gravel to prepare roadbed for paving, loads averaged 11 pay yds. Cycle of 5000 ft took 10 minutes. Haul was over rough scarified blacktop of old road. For information on any tools on these pages, write LeTourneau-Westinghouse Company, Peoria, Ill.

Tournapull—Trademark Reg. U.S. Pat. Off. Tournatractor—Trademark Pic-611-G

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for More Production and Lower Costs

*These Euclid Features
mean more payloads per hour*

- Stability and Safety of the 4-wheel tractor.
- Independent control of all Scraper operations.
- Lever actuated controls.
- Only 12 feet of cable.
- Simplified, compact hydraulic system with interchangeable jacks.
- Reversible, interchangeable cutting blades.
- 10-speed transmission . . . 28 m.p.h. with full payload.

*Outperforms all other
scrapers of comparable size!*

15.5 cu. yds. struck — 18 cu. yds. heaped at 3:1 — 21 cu. yds. at 1:1

Lever action, an exclusive Euclid development, is the most important advancement in Scraper design and performance in many years. Hydraulic jacks, each interchangeable with the other, operate levers that control the cutting edge, bowl and apron lift, and the positive roll-out ejector. No more down time due to broken cables . . . there is only one 12' length of cable, used for the apron lift, on the scraper.

The choice of leading contractors because of their high job availability, "Euc" Scrapers are now better than ever in production and low cost performance! Ask your Euclid Distributor for information on this new model!

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Euclid Equipment

FOR MOVING EARTH, ROCK, COAL AND ORE



» **CONTRACT** construction of rural electric and telephone systems is being adopted increasingly by Rural Electrification Administration borrowers, members of an A.G.C. specifications task unit were informed by top REA officials at a conference in Washington Feb. 11.

A.G.C. spokesmen explained to the REA officials how the contract method can save money for rural electric and telephone systems on maintenance and small construction jobs, as well as on major construction work.

The estimated trend of future line construction was discussed to help contractors in their planning. A reduction of about 10% in new construction of distribution lines was forecast for calendar 1954, but the volume of this type of construction will remain large. The REA loan program for the current fiscal year, ending June 30, provides about \$135 million for electrification and \$74 million for telephones.

Small Jobs Interest Firms

The chairman of the A.G.C. Task Unit for REA Specifications, Harry Hoak, Hoak Construction Co., West Des Moines, Iowa, said contractors could perform regular maintenance for REA borrowers on a fixed fee basis. Many contracting firms are in a position to split their crews into small units to handle maintenance economically and at the same time offer the protection of a large pool of trained manpower and equipment in the event

REA Contract Construction Rate Rising, Officials Tell A.G.C. Unit

of emergencies, such as ice storms, Mr. Hoak pointed out. With backbone construction in REA systems tapering off, many large contracting firms are eager to undertake jobs involving as little as 20 miles of line, he said.

REA officials urged contractors to keep in close contact with REA borrowers, since they are constructing numerous extensions of electrical distribution systems, and contractors may frequently obtain awards for this work. REA borrowers were reported to be growing more appreciative of the contract method for extensions, and the percentage of force account work on transmission line construction is declining.

REA Assistant Administrators J. K. O'Shaughnessy (Telephone) and Roy Zook (Electric) presented data showing that of 51,000 miles of electric line energized in 1953, about 12,500 miles of distribution lines and practically all the 3,900 miles of transmission lines were constructed by contracting firms. Mr. Zook said records of contracted work showed an increasing trend in favor of this method.

The Sept. 18, 1953, REA bulletin pertaining to the telephone program stipulates:

"(Method of Construction) Contracts for the purchase and installa-

tion of central office equipment and for the construction of buildings and outside plant shall be on standard contract forms furnished by REA which are subject to approval by REA. The award of such contracts shall be made to the lowest responsible bidder as a result of competitive bidding. . . . The construction of buildings and outside plant should be performed by contract with the contractor furnishing all labor and materials. REA will not, except in unusual cases, approve major construction by the borrower's own forces."

In the electrical program also REA advocates use of the contract method with the contractor furnishing all labor and materials.

REA officials agreed to further study of several problems raised by A.G.C. spokesmen, including:

- Contractors' need for earlier completion of staking sheets by the borrower's engineer.
- Questions concerning width of right-of-way.
- Definition of "due date" in calculating interest on delinquent payments to contractors.
- Clarification of "substantial" change in contract provisions.



Shown at the REA-A.G.C. Washington conference are: Left to right, seated—J. E. O'Brien, Chief, Electric Engineering Division, REA; Charles S. Embrey, Assistant Executive Director, A.G.C.; Harry Hoak, Hoak Construction Co., West Des Moines, Iowa, A.G.C. task unit chairman; REA Administrator Ancher Nelsen; J. K. O'Shaughnessy, Assistant Administrator (Telephone), REA; Roy Zook, Assistant Administrator (Electric), REA; E. C. Bridges, contractor, Heath Springs, S. C. Left to right, standing—J. H. Rixse, Jr., Assistant Chief, Electric Engineering Division, REA; W. H. Callaway, Chief, Southern Region (Electric Distribution), REA; R. W. Lynn, Chief, Telephone Engineering Division, REA; Wade M. Edmunds, Chief, Northern Region (Electric Distribution), REA; John Jardine, Jardine Bridge Co., Inc., Fargo, N. D.; C. L. Lewis, C-L Electric Co., Pocatello, Idaho; Dan Donovan, assistant, Highway Division, A.G.C.; A. N. Carter, manager, Highway Division, A.G.C.

Contractors Accept Invitation to Critique of Architects' Specs, "New Orleans Style"

» THE SPIRIT of cooperation that exists between the New Orleans chapters of The American Institute of Architects and The Associated General Contractors of America was exemplified in a recent issue of the A.I.A. chapter's *Bulletin*.

This publication reported results of a confidential poll of contractors' opinions on "What's Wrong with Architects' Specifications?" In addition to this interesting project, the *Bulletin* initiated a policy of including biographical sketches of outstanding men in the industry, with an article about George Farnsworth, 1953 head of the New Orleans Chapter, A.G.C. The A.I.A. chapter plans an annual citation for distinguished contributions to building by men in allied professions.

Results of the critique, which will be of interest to joint cooperative committees of other chapters, were digested as follows:

"Grandfather Clauses."—Clauses that are vague, the so-called 'grandfather clauses,' are anathema to the bidding fraternity. Particular exception was taken to the phrases 'as necessary' and 'as required.' It was recommended that such phrases be omitted from specifications unless the quantities or quality desired could be reasonably and accurately determined from the contract documents.

"Contractor to Blame."—Another 'grandfather clause' which was noted as making insidious inroads into local specifications is the much maligned 'save and hold harmless' clause, which, unless clearly limited to acts of negligence by the Contractor, attempts to pin responsibility upon him for happenings beyond his control.

"Doubts Add to Cost."—At the top of the list of the verbal atrocities was placed the Architect's favorite catch-all, which usually reads thus: 'Furnish and install this-or-that unless otherwise indicated on the drawings or herein specified.' This is usually a tip-off to the Contractor that someone is not very sure of himself. A doubt is planted in the Contractor's mind, even after an unsuccessful search for the exception, that somewhere the Architect has called for something different, possibly more expensive. He bids accordingly.

"Unwise Restriction."—Restriction

of a contractor to a non-competitive item also came into its just share of criticism. In such cases, the Contractors point out that the supplier who holds the franchise for a particular specified item may 'load' his price to the Contractor. In addition, in extreme cases, the supplier may be placed in the position of being able to secure an unfair advantage for a particular contractor on a competitive job by giving him a low price and inflating prices to other bidders.

"Some Restrictions Necessary."—It was pointed out that if for some reason the Architect feels that he must restrict a particular item, he should secure the price from the supplier and have the Contractor carry it in his bid as an allowance.

"Allowances."—With reference to allowances, criticism was also directed at the lack of clarification usually found in specified allowances which often results in bitter controversy as to whether allowance was for purchase of items only or for the furnishing and installation thereof. Contractors cited examples of cases where they understood that allowance was to include installation, only to discover that entire allowance was later expended for purchase only, and they were expected to effect the installation without having provided funds for same. They claim that the fabled 'contingency' fund went out with Guffey's Reader.

"Guarantees of Design."—Particular exception was made to clauses which make the Contractor in effect guarantee the sufficiency of the design. The Contractors object strenuously to having to accept responsibilities which are not limited to defects in workmanship and materials. One contractor cited a precisely detailed waterproofing specification which outlined the Contractor's every step, every material to be used, and each procedure to be followed in his execution of the work, at the same time requiring him to guarantee this waterproofing job for a five-year period. Another objected to accepting responsibility for leaks and water damage for causes other than materials and workmanship, particularly when job was executed per plan. One recalled a specification where Contractor was held responsible for 'any sinkage or cracks in floor slab occur-

ring within one year of acceptance.'

"Controversies Avoided."—While it was recognized by Contractors that legally they could not be held responsible for many such items, they also point out that litigation is as unwelcome to them as it is to Architect or Owner, and that where such doubts are planted they will either avoid bidding the job or bid an excess in proportion to an anticipated loss.

"Sectional Division."—On the complimentary side, much favorable comment was directed toward those specifications which showed a meticulous effort to separate sections of the specifications as they relate to the various trades. Contractors and Architects are well aware that such separation is for convenience only, and that the Architect will not be expected to become an arbiter as to trade distribution. Nonetheless, the sectional arrangement is appreciated by the estimator, particularly when compared to specifications which run continuously from page 1 to conclusion without a sectional division.

"Apparently some specifications are still being written in the latter manner, and are usually accompanied by an index which proposes to locate page numbers of the various items but which inevitably fails to include a particular item for which the estimator has searched in vain. The resultant confusion, particularly duplication of estimating among the various sub-contractors, is invariably reflected in the bid.

"By Others."—Additional items which met with diverse comment and criticism included the use of the expression 'Install . . .' when in fact 'Furnish and install . . .' is intended, and using 'By others' to mean 'provided under another section of the specifications.' The latter expression 'By others' can only be interpreted by the Contractor as applying to someone not bound by the General Contract.

"Toward Greater Clarity."—The general feeling of Contractors toward Architects' specifications appears to be a great desire for more clarity and less controversy, a responsibility that must be met by the Architect. The closing remarks of one Contractor's letter are particularly appropriate:

"A close bid by a Contractor is frequently due to needing the job to keep his organization intact. More frequently it is a reflection of his confidence in a particular Architect to outline the job requirements clearly and to inspect the job in the role of an arbiter rather than a policeman."

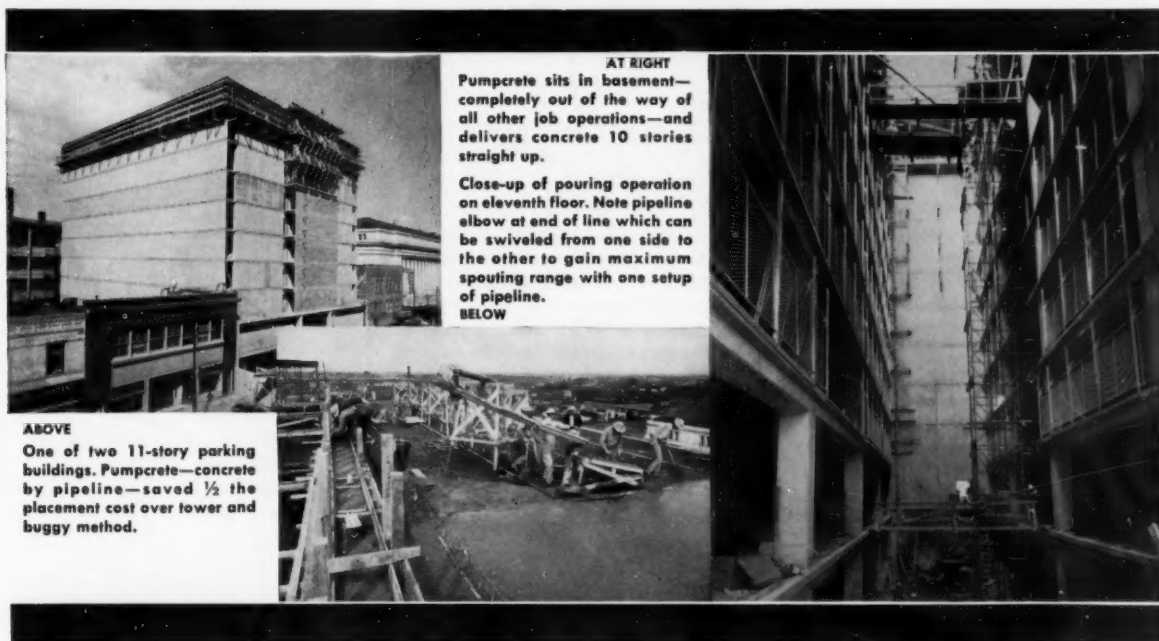
Concrete for Two Parking Buildings Pumped at 1/2 Original Estimate

Using a single 160 Pumpcrete, a wise contractor placed the concrete for two 11-story parking buildings—at a saving of 1/2 the original estimate for doing the job with towers and concrete buggies. The jobs were several blocks apart, but the readily portable Pumpcrete was easily shuttled between the two for alternate pours.

Located at basement level, Pumpcrete was readily accessible to truck mixers that delivered concrete to the site through the alley. Pipeline was

run up floor by floor as fast as pouring progressed. Compare this simplicity with ramps, buggy runs, towers, and other cost-adding preparatory work.

Important too, on a job such as this where job area is congested, was the absence of interference among the various trades. Form setters, steel setters, masons, electricians, etc., could work on schedule without being hampered by pouring crews and buggy traffic.



AT RIGHT
Pumpcrete sits in basement—completely out of the way of all other job operations—and delivers concrete 10 stories straight up.

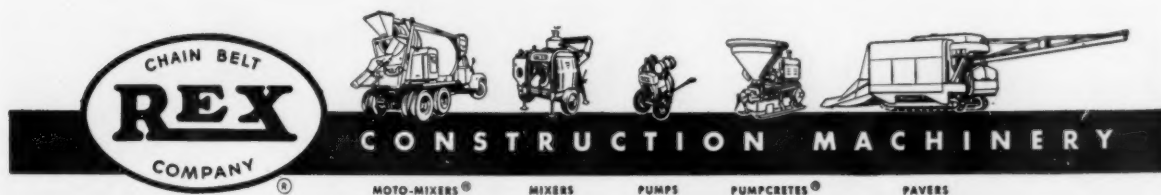
Close-up of pouring operation on eleventh floor. Note pipeline elbow at end of line which can be swiveled from one side to the other to gain maximum spouting range with one setup of pipeline.
BELOW

ABOVE
One of two 11-story parking buildings. Pumpcrete—concrete by pipeline—saved 1/2 the placement cost over tower and buggy method.

When you pump concrete . . . costs come down

IF YOU'RE INTERESTED in seeing other types of jobs on which Rex Pumpcrete has cut the cost of concrete placement, we will be happy to send you copies of "It was done with Pumpcrete."

There may be helpful data you can use to cut costs on your jobs. See your Rex Distributor, or write Chain Belt Company, 4625 W. Greenfield Ave., Milwaukee 1, Wis.



Vermont Does New Type of Road Upkeep by Contract

• Good Results Ensure Continuance of Procedure

By Loyd W. Brownell

Maintenance Engineer, Vermont Department of Highways

» LAST summer the Vermont State Department of Highways elected to use chemical weed spraying as a maintenance procedure for the first time and in doing so awarded the work to contract. The department also awarded to contract bituminous resurfacing work. During the previous year the department awarded a contract for the repairing and resetting of a considerable length of existing guard rail. On all three types of work the contract procedure proved highly successful.

The contract signed by the department with the Cardinal Chemical Company of Clinton, New York, for the chemical weed spraying was simple and brief. It read as follows:

The contractor hereby agrees and binds itself to furnish all labor, materials, chemicals, machinery and equipment to kill all woody plants including poison ivy and briars in the areas to be designated by the owner.

The contractor further agrees that the chemicals to be used will not be poisonous to cattle, other animals, or persons, and further agrees that the work will be done in a good, workmanlike manner.

The contractor assumes responsibility for any damages to crops, orchards, or gardens arising out of any negligence of contractor in the spraying of

the chemicals over said areas; and ten days to two weeks prior to starting work, a certificate of insurance will be given to the owner by the contractor to cover the work being done under this contract.

The owner hereby agrees to pay the contractor the sum of \$25.00 per each 100 gallons of spraying materials applied by contractor pursuant to this contract.

The owner agrees to furnish one man to instruct the contractor as to the area to be sprayed.

The contractor hereby agrees in case any of the poison ivy or rag weed is not killed by this application and starts growing the following year, that a second application will be applied without cost to the state.

The Cardinal Chemical Company chose to use a spray compound designated Esteron Brush Killer 2, 4-D and 2, 4, 5,-T esters. It was applied at the approximate rate of 0.1 gallons per 100 square feet. Details of the application procedure are shown by the accompanying photograph. General procedure was to spray the shoulders and seeded areas about once every two months. During the summer most of the areas received a total of three treatments.

Weed spraying operations by contract were carried out in many loca-



Mr. Brownell

Mr. Brownell joined the Vermont Highway Department as a transitman and inspector in 1935 two years after receiving a civil engineering degree from Norwich University. In 1937 he became a project engineer in the department, a post he left in 1942 to serve overseas with the U. S. Army Aviation engineers building airports.

After four years of Army service Mr. Brownell returned to Vermont as superintendent of the state highway hot mix plant in 1946, becoming project engineer again the following year and the year after that, state highway maintenance engineer. He interrupted his service in this capacity two years later, in 1950, to spend a year with the U. S. Army post engineers on Okinawa, returning to his present post in 1951.

tions in the state. The procedure followed was simply that the district engineers of the state highway de-

Below, state highway route 14 near the town of Sharon. The double spray may be seen; the shoulder of the road receives the chemical from a sprayer fixed to the truck while the area beyond the guard rail is sprayed from a nozzle held by a man seated on the vehicle. Application is at the rate of .1 gallon per 100 square feet.



This is the fourth in a series of articles describing the benefits of handling highway maintenance work by contract. Reprints are available.

partment designated those areas to be sprayed and in a few days Cardinal Chemical treated these areas. The firm was paid at the rate of \$0.25 per gallon of chemical used. During last year a total of 42,300 gallons was applied under the contract with Cardinal Chemical.

Procedure To Be Used In 1954

Benefits from the weed spraying contract were sufficient to ensure that a similar contract will be awarded in 1954. Our experience would indicate that a contract similar to the type we use can be highly satisfactory. We are most satisfied with the results.

In 1952 a \$7,260 contract was awarded to Webster and Webster, Inc., of East Hartford, Conn., for the removal, rehabilitation, resetting and painting of nearly 6,000 lineal feet of guard rail. The contractor was paid on the basis of lineal feet of work involved. All the old posts were replaced by new 4 by 6-inch steel H posts weighing 8.4 lbs. per lineal foot, and the contractor was paid on a unit price basis for each post installed.

No special difficulties were encountered on the guard rail project. Although we had insufficient work of this type in 1953 to warrant award of a contract, the 1952 project would indicate that the contract system can be applied satisfactorily to this maintenance operation.



State highway route 9 near the town of Woodford.

A bituminous resurfacing project awarded to W. H. Hinman, Inc., North Anson, Maine, illustrates another maintenance operation successfully carried out by the contract system. The job involved surfacing of an existing portland cement concrete pavement with a bituminous concrete surface. The contract required preparation of the transverse joints of the existing pavement, cleaning of the old pavement and then application of a bituminous, concrete surface varying in width from 24 to 34 feet and in thickness from $2\frac{1}{8}$ to $2\frac{1}{2}$ inches. The contractor was paid on a per ton basis for the asphaltic concrete; per lineal foot for preparing the joints, and on a square yard basis for preparing the pavement for the new surface.

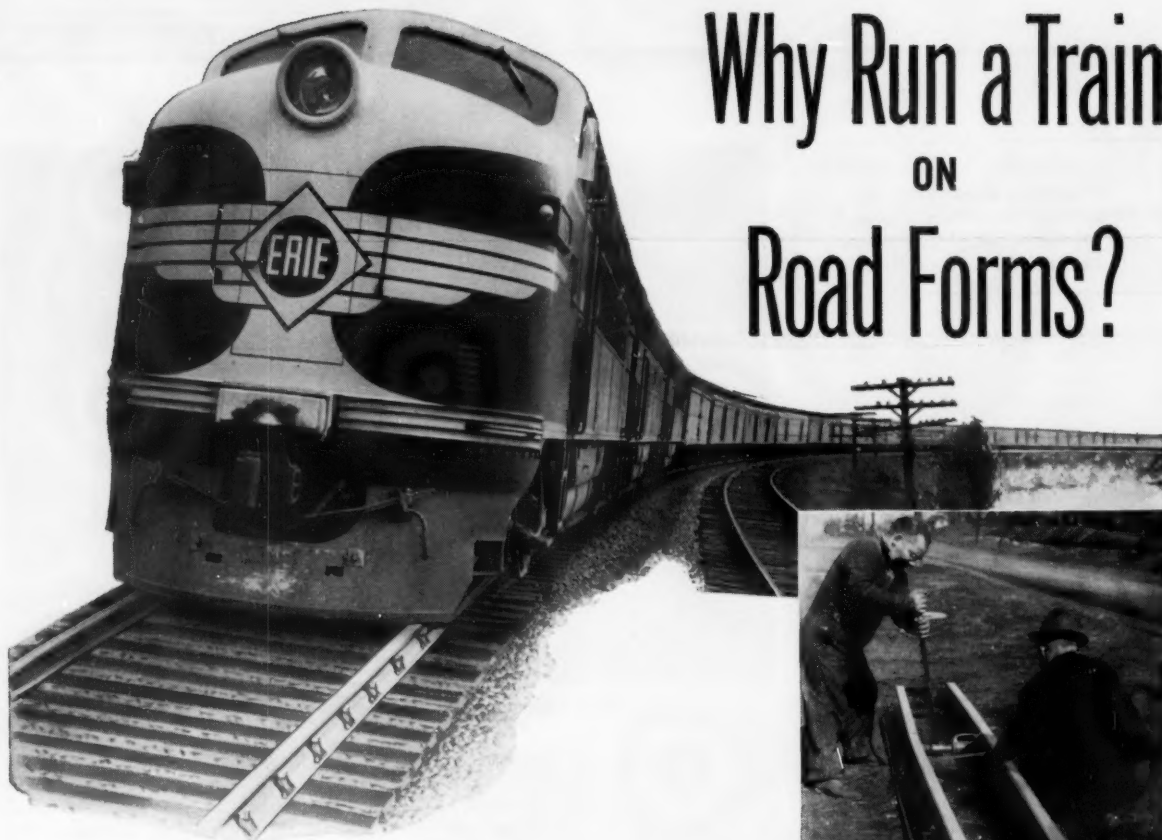
No special problems arose on the resurfacing work. Additional work was done in 1953 and we are hopeful that additional similar contracts can be awarded in 1954.

Contractor's Initiative Cited

On all the operations described we were impressed with the initiative shown by the contractor and his crews in developing equipment and procedures that would expedite the work and permit economical operations. All the contracts were awarded in a manner similar to our regular new construction contracts with competitive bids being received, the work awarded to the low bidder, and the contractor required to furnish the usual bond.

Below, bituminous resurfacing of U. S. Route 7 in Bennington Village.





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First of all, they bolted a Heltzel form to a similar form of another make. Inserting a jack at the center point they applied pressure to compare bending moments. The Heltzel form remained rigid while the other form weakened and bent to the pressure.

Secondly, they put the two forms to an impact test. Two men wielded sledges and alternately attempted to smash the forms apart. Here again the Heltzel form withstood the punishment as the second form was damaged beyond repair.

Finally, they set up two lines of Heltzel forms and backed a loaded freight train over them without a sign of failure.

What does all this prove? Simply that when you buy Heltzel forms you're getting the best that money can buy at no increase in price. A road form must be able to withstand punishment year in and year out, with replacement held to a minimum. That's why Heltzel engineers have gone to such great lengths to design and build and to prove the Heltzel form is the finest ever made.

Let Heltzel prove it to you. It will pay handsome dividends. For additional information, or the name of the Heltzel representative nearest you, write THE HELTZEL STEEL FORM AND IRON CO., WARREN, OHIO.

Write for Bulletin K-19 NOW!



» THE LARGEST federal-aid road construction program in history would be authorized for the fiscal years beginning July 1, 1955 and 1956 by the McGregor bill (H.R. 7818), announced by its author last month as the official Administration measure for an expanded highway program.

McGregor Bill Supported at Hearings—Page 27

The total federal-aid appropriations of \$800 million proposed for each year compares with the current authorization of \$575 million yearly. In addition, the bill proposes \$83 million annually for road purposes other than federal aid, plus \$4 million for the Rama Road in Nicaragua to be available until expended.

Approaches Gas Tax Yield

The aggregate of \$883 million in annual authorizations, plus the \$4 million lump sum for Nicaragua, would approach the annual yield of the 2¢ federal gasoline tax, now estimated at \$910 million, thereby "answering the complaints of taxpayers, and of the governors of many states, that gasoline tax revenues are being diverted in substantial part to purposes other than road building," according to Congressman McGregor (R-Ohio).

The bulk of the proposed increase of \$225 million in federal-aid authorizations would be for the national system of interstate highways. For this purpose \$200 million a year would be authorized, as compared with the present \$25 million.

Authorizations for all other federal-aid categories would also be increased. The annual figures proposed in the McGregor bill and in present legislation in all federal-aid categories compare as follows:

- Primary system, proposed, \$270 million; present, \$247.5 million.
- Secondary roads, proposed, \$180 million; present, \$165 million.
- Urban highways, proposed, \$150 million; present, \$137.5 million.
- Interstate highways, proposed, \$200 million; present, \$25 million.

These sums would all be subject to matching by the states under the federal-aid formula, and the programs would be administered through the present channels of the Bureau of Public Roads and the states.

Annual authorizations contained in the bill for road purposes other than federal aid are as follows:

'Administration Bill' Recommends 40% Increase in Federal-Aid Funds

- From \$575 Million to \$800 Million in 1955 and 1956

- Forest highways, \$22.5 million; forest roads and trails, \$22.5 million; Park Service roads, \$10 million; parkways, \$10 million; Indian roads, \$10 million; Rama Road, Nicaragua, \$4 million (not annually, but until spent); and Inter-American highways, \$8 million.

These proposed authorizations are the same in each instance as in present legislation, with the exception that for the Rama Road in Nicaragua the existing authorization is for \$2 million in each of two years.

Linked to Gas Tax

The \$200 million annual authorization proposed for the interstate highway system is predicated on retention of the present 2¢ federal gasoline tax. The tax is scheduled to drop to 1½¢ on April 1, unless it is extended by Congress, as President Eisenhower has recommended.

With respect to the \$200 million annually for interstate highways, the bill provides that "the Secretary of Commerce shall not apportion to the states the sum authorized by this section for the fiscal year ending June 30, 1956, unless a federal excise tax on gasoline in the amount of not less than 2¢ per gallon is in effect on Dec. 31, 1954; and the Secretary of Commerce shall not apportion to the states the sum authorized by this section for the fiscal year ending June 30, 1957, unless a federal excise tax on gasoline in the amount of not less than 2¢ per gallon is in effect on Dec. 31, 1955."

In a statement at the time his bill was introduced, Mr. McGregor described as "a major innovation in federal-aid highway policy," a provision under which "the individual states, rather than the federal government, would have the controlling voice in expenditure of a portion of the funds allocated to them."

Under this provision, he explained, money made available to each state for construction of secondary, or farm-to-market, roads could be expended by the state in accordance with its own official specifications for such roads, without the necessity of obtaining prior federal approval of individual

projects. Existing law requires a state to meet "certain rigid specifications" to qualify for expenditure of federal funds on a secondary road, Mr. McGregor said. These specifications are "unnecessarily costly" and result in "cumbersome procedures," he added.

Permits Transfer of Funds

The McGregor bill also contains a provision—described by the author as "another important innovation"—permitting the transfer from one system to another of not more than 25% of the funds allocated to each state for the primary, secondary and urban road systems. This provision, he pointed out, would also have the effect of expanding the voice of the states in the expenditure of funds within their boundaries. It would be helpful to states in situations where they find themselves "starving" for a particular type of road, while holding a surplus of funds available for another but unneeded type, he explained.

"There have been cases where states have a great need for secondary roads, little need for more primary roads, or where states have little need for additional secondary roads, and a great need for more urban construction," Mr. McGregor said. "But because the funds available have not been transferable, there has been nothing they could do to meet their specific needs. This provision would eliminate that situation."

Another section of the bill provides for federal cooperation with state highway departments in a study of the problems arising from the need for relocation or reconstruction of public utility facilities as a result of highway construction.

The McGregor bill is the outgrowth of extensive hearings on highway legislation before the House Subcommittee on Roads last year.

The federal-aid proposals in the bill, except the \$200 million fund sought for the interstate network, are halfway between the amounts currently authorized and the amounts recommended by the American Association of State Highway Officials at its annual convention last November.

A.A.S.H.O. Sets Federal-Aid Highway System Needs at \$35 Billion

A REVISION of estimated deficiencies in the federal-aid systems recently completed by the American Association of State Highway Officials indicates that 63.8 per cent of the total approved 673,137 miles of highways are in need of improvements which would cost approximately \$35 billion. The breakdown of needs, as of Nov. 1, 1953, is as follows:

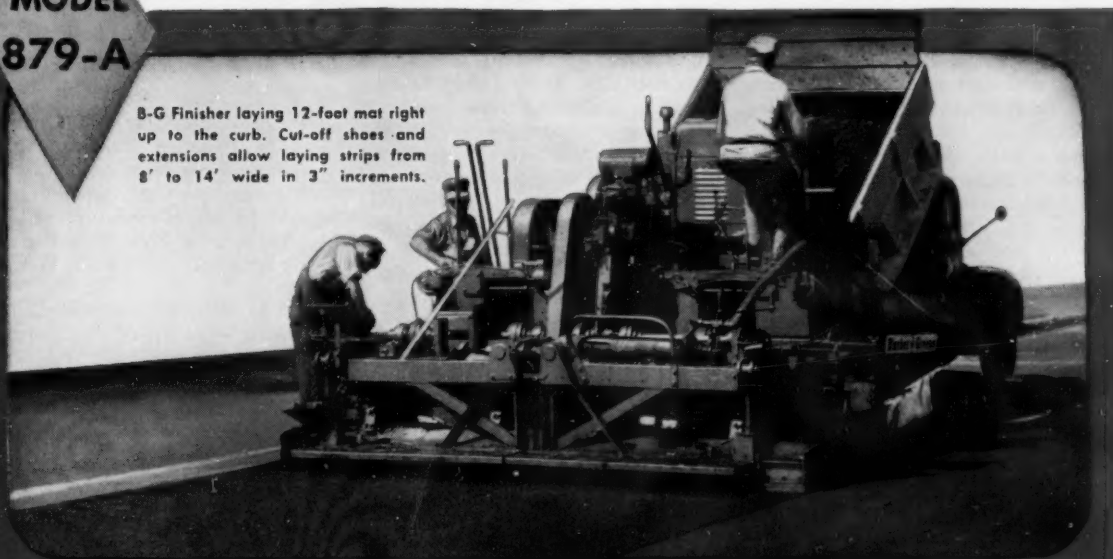
| STATE | PRIMARY | | SECONDARY | | URBAN | | ALL SYSTEMS | | STATE |
|----------------------|----------------------|----------------|----------------------|----------------|----------------------|----------------|-------------|----------------------|-------------------|
| | MILES OF IMPROVEMENT | COST (\$1,000) | MILES OF IMPROVEMENT | COST (\$1,000) | MILES OF IMPROVEMENT | COST (\$1,000) | TOTAL MILES | TOTAL COST (\$1,000) | |
| Alabama | 1,551 | 126,131 | 5,411 | 118,485 | 221 | 70,778 | 7,183 | 315,394 | Alabama |
| Arizona | 1,712 | 126,098 | 2,497 | 68,511 | 73 | 34,814 | 4,282 | 229,423 | Arizona |
| Arkansas | 2,775 | 234,789 | 11,854 | 280,069 | 115 | 101,323 | 14,744 | 616,181 | Arkansas |
| California | 4,556 | 982,614 | 5,971 | 646,920 | 534 | 1,077,581 | 11,061 | 2,707,115 | California |
| Colorado | 1,134 | 148,582 | 1,762 | 112,713 | 74 | 68,600 | 2,970 | 329,895 | Colorado |
| Connecticut | 442 | 225,321 | 376 | 83,647 | 244 | 383,088 | 1,062 | 692,056 | Connecticut |
| Delaware | 362 | 63,731 | 983 | 21,597 | 41 | 40,635 | 1,386 | 125,963 | Delaware |
| Florida | 2,647 | 223,579 | 3,754 | 172,442 | 364 | 434,406 | 6,765 | 830,427 | Florida |
| Georgia | 3,000 | 418,000 | 8,000 | 200,000 | 310 | 222,000 | 11,310 | 840,000 | Georgia |
| Idaho | 2,024 | 176,754 | 2,439 | 73,064 | 40 | 15,290 | 4,503 | 265,108 | Idaho |
| Illinois | 3,310 | 604,573 | 4,062 | 89,964 | 460 | 785,686 | 7,832 | 1,480,223 | Illinois |
| Indiana | 3,374 | 327,343 | 5,683 | 334,179 | 284 | 65,940 | 9,341 | 727,462 | Indiana |
| Iowa | 7,465 | 646,000 | 16,533 | 182,392 | 778 | 115,400 | 24,776 | 943,792 | Iowa |
| Kansas | 3,910 | 338,679 | 10,575 | 116,990 | 168 | 120,150 | 14,653 | 575,819 | Kansas |
| Kentucky | 3,010 | 240,800 | 13,200 | 528,000 | 105 | 70,500 | 16,315 | 839,300 | Kentucky |
| Louisiana | 2,000 | 160,000 | 3,800 | 91,200 | 198 | 171,282 | 5,998 | 422,482 | Louisiana |
| Maine | 887 | 84,799 | 694 | 27,974 | 76 | 45,048 | 1,657 | 157,821 | Maine |
| Maryland | 976 | 221,104 | 4,586 | 202,026 | 162 | 228,905 | 5,724 | 652,035 | Maryland |
| Massachusetts | 813 | 249,460 | 1,910 | 269,028 | 657 | 442,663 | 3,380 | 961,151 | Massachusetts |
| Michigan | 3,212 | 227,948 | 14,429 | 300,079 | 271 | 234,031 | 17,912 | 792,058 | Michigan |
| Minnesota | 4,140 | 155,811 | 12,216 | 245,387 | 352 | 213,114 | 16,708 | 614,312 | Minnesota |
| Mississippi | 2,890 | 155,500 | 5,950 | 95,000 | 114 | 22,150 | 8,954 | 272,650 | Mississippi |
| Missouri | 5,437 | 385,664 | 11,730 | 101,700 | 243 | 284,000 | 17,410 | 771,364 | Missouri |
| Montana | 4,200 | 306,600 | 1,950 | 64,350 | 27 | 10,600 | 6,177 | 381,550 | Montana |
| Nebraska | 3,416 | 185,311 | 4,952 | 114,080 | 78 | 31,957 | 8,446 | 331,348 | Nebraska |
| Nevada | 1,789 | 96,397 | 1,088 | 29,874 | 22 | 8,267 | 2,899 | 134,538 | Nevada |
| New Hampshire | 828 | 88,597 | 852 | 60,243 | 100 | 23,960 | 1,780 | 172,800 | New Hampshire |
| New Jersey | 703 | 881,550 | 1,097 | 112,779 | 255 | 670,300 | 2,055 | 1,664,629 | New Jersey |
| New Mexico | 1,852 | 176,530 | 2,367 | 95,660 | 60 | 24,000 | 4,279 | 296,190 | New Mexico |
| New York | 4,452 | 1,262,100 | 9,435 | 658,900 | 1,082 | 965,200 | 14,969 | 2,886,200 | New York |
| North Carolina | 3,854 | 358,600 | 600 | 20,000 | 213 | 111,825 | 4,667 | 490,425 | North Carolina |
| North Dakota | 2,309 | 111,800 | 8,726 | 121,383 | 165 | 30,900 | 11,200 | 264,083 | North Dakota |
| Ohio | 2,800 | 600,000 | 3,900 | 390,000 | 400 | 750,000 | 7,100 | 1,740,000 | Ohio |
| Oklahoma | 4,826 | 485,928 | 7,074 | 171,447 | 165 | 108,123 | 12,065 | 765,498 | Oklahoma |
| Oregon | 2,930 | 216,817 | 3,203 | 106,465 | 108 | 67,285 | 6,241 | 390,567 | Oregon |
| Pennsylvania | 3,800 | 837,880 | 4,656 | 297,015 | 196 | 213,056 | 8,652 | 1,347,951 | Pennsylvania |
| Rhode Island | 79 | 28,190 | 102 | 10,606 | 83 | 135,146 | 264 | 173,942 | Rhode Island |
| South Carolina | 3,358 | 114,743 | 4,866 | 66,421 | 160 | 81,300 | 8,384 | 262,464 | South Carolina |
| South Dakota | 2,965 | 195,393 | 8,612 | 142,399 | 76 | 16,340 | 11,653 | 354,132 | South Dakota |
| Tennessee | 3,867 | 617,089 | 6,570 | 195,430 | 110 | 77,177 | 10,547 | 889,696 | Tennessee |
| Texas | 13,227 | 803,892 | 15,393 | 278,130 | 684 | 359,317 | 29,304 | 1,441,339 | Texas |
| Utah | 1,836 | 175,000 | 1,832 | 50,000 | 131 | 59,000 | 3,799 | 284,000 | Utah |
| Vermont | 806 | 121,461 | 944 | 34,172 | 35 | 17,570 | 1,785 | 173,203 | Vermont |
| Virginia | 4,031 | 324,832 | 10,239 | 271,186 | 211 | 95,783 | 14,481 | 691,801 | Virginia |
| Washington | 2,588 | 328,015 | 4,144 | 165,749 | 162 | 244,614 | 6,894 | 738,378 | Washington |
| West Virginia | 2,149 | 453,831 | 9,399 | 516,682 | 173 | 201,830 | 11,721 | 1,172,343 | West Virginia |
| Wisconsin | 4,280 | 428,000 | 14,800 | 624,000 | 200 | 140,000 | 19,280 | 1,192,000 | Wisconsin |
| Wyoming | 2,145 | 124,975 | 772 | 22,613 | 27 | 11,804 | 2,944 | 159,392 | Wyoming |
| District of Columbia | | | 18 | 5,284 | 60 | 106,623 | 78 | 111,907 | Dist. of Columbia |
| Hawaii | 164 | 15,875 | 231 | 26,372 | 17 | 6,658 | 412 | 48,905 | Hawaii |
| Puerto Rico | 335 | 102,000 | 885 | 60,000 | 60 | 68,000 | 1,280 | 230,000 | Puerto Rico |
| Total | 141,216 | 15,994,686 | 277,122 | 9,072,607 | 10,944 | 9,884,019 | 429,282 | 34,951,312 | Total |

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Administration Gropes for Policy To Govern Resource Development

By Edward A. Greene, Staff Member

» THE ADMINISTRATION is currently working out a national water policy to fit the needs of the entire nation and the economic groups therein.

Such a policy has been called for by private groups, including the National Reclamation Association, as well as the President to determine what role the federal agencies are to play in the future development of water resources, and the extent of participation by state and local governments and private enterprise in this field.

Key to any water policy is the effective coordination of flood control, irrigation, navigation and power facilities which put the water to the best possible use.

President Calls for Policy

President Eisenhower on two occasions recently pointed out the need for a national water policy. In his State of the Union message, the Chief Executive called for "a uniform and consistent water resources policy." He hinted that many knotty problems will have to be solved first when he recommended "enactment of legislation to strengthen agricultural conservation and up-stream flood prevention work, and to achieve a better balance with major flood control structures in the down-stream areas."

A.G.C. Asks TVA Force Account Limit—Page 27

In his economic report two weeks later, Mr. Eisenhower spoke of the "large task" of developing integrated long-term federal works in the fields of water and soil conservation. He also told of a backlog of public works projects held up because of recent defense priorities on manpower, materials and public funds.

In addition to financing and materials problems, there is the question of which executive branch of the government will carry out the different phases in developing water resources.

McKay's Remarks Significant

Interior Secretary Douglas McKay summed up the situation best last

October when he told the National Reclamation Association meeting in Reno that three federal departments, operating under different laws, are developing the water resources of the nation. The Defense Department through the Corps of Engineers is primarily interested in flood control; the Agriculture Department is responsible for soil conservation; and the Department of the Interior is the federal agency for reclamation.

"We frequently find ourselves in conflict," he said. "I once thought this conflict was primarily because of jealousies and ambitions of the three departments. As I have become more familiar with the problems, I have become convinced that these difficulties are only in part due to jealousies and ambitions. More particularly, there are difficulties because there is basic conflict among the laws of Congress and the Administration policies. I am satisfied that these conflicts can be resolved through the establishment of a national water policy, and in fact this is necessary."

He also told the meeting how he had participated in conferences with the Secretary of the Army and the Chief of Engineers to resolve many of their common problems.

Single Agency Discounted

"We have already reached a general agreement on the allocation of costs of multiple-purpose projects and . . . (recently) we published a common real estate policy which both departments will hereafter follow in connection with reservoirs. We are continuing to hold these high-level conferences and they are most productive. The conflicts that can be resolved by this method are presenting no substantial problem," he explained.

Mr. McKay discounted the possibility of the Administration's placing the development of the country's water resources under one federal agency when he said that such a branch would find itself "thoroughly confused" with existing laws.

Instead of working with a "patchwork of conflicting laws," which often result in waste and retard conservation, the Administration must review

and develop an over-all program. Though Mr. McKay did not state the principles he thought such a water policy should embody, he did say that the proposals made by the N.R.A. late in 1952 would be "an excellent point from which to start."

N.R.A. Water Policy

Here is a summary of the N.R.A. proposals:

- Local interests should take the lead in planning, constructing and operating water resource development.

- Future projects, when practical, should be proclaimed for basin-wide development in order to bring about every beneficial use of water and water power.

- The interstate compact should be employed when organizing multi-purpose or basin-wide developments of an interstate nature.

- The use of the water should be provided for by state law, and power derived therefrom should be incident to the impounding of water for irrigation.

- A careful study should be made of the division of costs for reclamation projects to include reimbursables, such as revenues from the sale of power, and non-reimbursables like flood control.

- Federal government and other interests should conform to the water laws of the states involved, and federal claims to unappropriated water should be abandoned in favor of laws of the reclamation states.

- Development of power is dependent upon local or interstate conditions and should be a feature of all reclamation projects when feasible. Power should be sold to public and private users at the bus bar and duplicate transmission lines should be avoided.

- Land limitation should be more liberal and should not apply to supplemental water projects.

- Forests and rangelands, as important sources of water supply, should be managed to provide optimum runoff. Also, erosion should be avoided wherever possible.

The N.R.A. also opposed the valley authority plan as well as the proposal of the President's Water Policy Commission (1950) and recommended instead the combined organization of state, local and federal governments in developing water resources.

[Ed. Note: The N.R.A. has repeatedly passed resolutions endorsing the contract method of construction.]

Administration officials have indicated opposition to the creation of more valley authorities patterned after the Tennessee Valley Authority, and the President's budget message proposed that an "adequate rate of interest be paid to the Treasury on public funds invested in power facilities of the TVA."

In addition to reclamation as one phase in developing a water policy, there are problems concerning the Agriculture Department in soil conservation and the Corps of Engineers in flood control.

The probability of a quick and easy solution to these problems grew dim last month when the heads of both agencies issued important policy statements reiterating their firm stands and guarding their rights to construct the appropriate facilities to carry out traditional roles in the development of water resources.

Corps Fights Small Dam Bill

On Feb. 15, Chief of Engineers Maj. Gen. S. D. Sturgis appeared before the Senate Agriculture Committee to recommend substantial revisions in an Administration-backed bill, S.2549, which would authorize a network of upstream flood control projects to be built by the Agriculture Department. The bill was sponsored jointly by Senator Aiken of Vermont and Representative Hope of Kansas, chairmen of the respective Senate and House Agriculture Committees, to implement the President's requests for more soil conservation.

Would Cause Duplication

Gen. Sturgis said that the bill, if passed, would put the Soil Conservation Service in direct competition with the Corps. The proposed legislation "contains provisions which are not in the public interest and will inevitably lead to duplication and confusion in federal activities, specifically in flood control, and which will make more difficult the already complex problem of coordinated water resource development."

Instead of providing for soil conservation the bill would give the Agriculture Department authority to build engineering works "far in excess of any works required for conserving the soil and increasing its productivity. In fact this is the only type of work that would be authorized by this bill which the Secretary of Agriculture

does not already have full authority to undertake," Gen. Sturgis continued.

Stevens Backs Sturgis

Army Secretary Robert T. Stevens, backing up Sturgis' testimony, said in a letter to the committee that the bill "might divide jurisdiction between the Department of Agriculture and the Department of the Army for the engineering phase of the flood control activity; and would promote competition and duplication of work between federal agencies."

Gen. Sturgis said that the maximum

size of flood control reservoirs in the bill should be limited to 500 acre-feet, and not the stated 5,000 acre-feet.

If the bill is amended to provide federal "assistance to local organizations in accomplishing soil conservation and watershed treatment programs, and in building the small structural measures," the Secretary of the Army will support it, Gen. Sturgis said. He added that such a course would provide for practical cooperation between the Army and the Agriculture Departments in the development of our land and water resources.

Building Solidly

CENTRAL SURETY AND INSURANCE CORPORATION

Condensed Financial Statement December 31, 1953

ASSETS

| | | |
|----------------------------------|-----------------|------------------------|
| Cash (in Banks and Offices) | | \$ 1,386,579.28 |
| Bonds: | | |
| U. S. Government | \$ 5,236,812.77 | |
| State, County and Municipal | 10,397,889.40 | |
| Federal Banks | 255,869.92 | |
| Public Utilities | 4,500.00 | 15,895,072.09 |
| Stocks: | | |
| Public Utilities | 540,865.00 | |
| Banks | 66,040.00 | |
| Central Surety Fire Corporation | 631,172.68 | |
| Industrial and Miscellaneous | 108,464.00 | 1,346,541.68 |
| Total Cash and Invested Assets | | \$18,628,193.05 |
| Premiums in Course of Collection | | 1,209,611.92 |
| Accrued Interest on Investments | | 96,767.20 |
| Other Assets | | 89,700.07 |
| TOTAL ADMITTED ASSETS | | \$20,024,272.24 |

LIABILITIES

| | | |
|---|-----------------|------------------------|
| Reserve for Claims and Losses | \$ 7,335,962.74 | |
| Reserve for Unearned Premiums | 6,017,886.81 | |
| Total Claim, Loss and Premium Reserves | | \$13,353,849.55 |
| Reserve for Taxes and other Liabilities | | 706,969.80 |
| Total Reserves | | \$14,060,819.35 |
| Capital | \$ 2,000,000.00 | |
| Surplus | 3,963,452.89 | |
| Surplus to Policyholders | | \$ 5,963,452.89 |
| TOTAL | | \$20,024,272.24 |

Securities carried at \$1,277,853.18 in the above statement are deposited for purposes required by law.

Bonds are carried at amortized values. No bonds were in default either as to principal or interest at December 31, 1953.



It's Wise
to
CENTRALIZE

HOME OFFICE KANSAS CITY, MISSOURI

One week after the Army testified against the bill, Agriculture Secretary Ezra Taft Benson told the National Association of Soil Conservation Districts, meeting in New Orleans, that his department believes in a "dynamic" soil and water conservation program and intends to "discharge fully its part of that responsibility."

It is important to increase the nation's physical agriculture plant, despite present surpluses, to meet the needs for food which are certain to grow heavier in future years, Mr. Benson added.

Benson Stresses Conservation

With the population increasing at a rapid rate, and expected to reach 190 million by 1975, farm production will have to be increased by 25% to 40% in the next 25 years. Since the country does not have enough new land to meet the future needs, the per-acre yields on the farms must be increased, Mr. Benson asserted.

To stress the size of his department's soil and water conservation program, Mr. Benson said that in fiscal

1954 half of the department's \$711 million budget went for specific soil and water conservation items. To get more conservation for the dollar, the Soil Conservation Service was recently reorganized and given greater responsibility for formulating and carrying out programs.

Reviews Watershed Program

On upstream flood prevention, Mr. Benson reviewed the pilot watershed protection project authorized last year by Congress for the first time. The program calls for soil and water conservation and flood prevention resulting from the construction of small upstream dams. Scheduled for completion in five years, the plan is designed to provide a balance with the Corps of Engineers' major flood control dams downstream.

Secretary Benson has the backing of President Eisenhower who last November authorized the Agriculture Department to increase its program in soil conservation and upstream flood control.

Local Participation Sought

The Administration, in line with its general conservation policy, already is moving to give the state and local governments, and where practical, private enterprise, increasing roles in developing the country's water resources.

In view of recent policy trends, and despite recommendations of groups such as the old Hoover Commission, which called for placing the civil functions of the Corps of Engineers in the Interior Department, it appears that the Administration will alter only slightly the present policy of developing water resources.

The Reclamation Bureau, working with local groups will continue its irrigation program in the 17 reclamation states; the Corps of Engineers will be charged principally with flood control and navigation on the nation's rivers; and the Agriculture Department will increase its soil conservation program, including agricultural phases of flood control.

TRANSCRETE AVAILABLE IN 3 TO 6 YARD CAPACITIES



CMC's Transcrete — the simplest truck mixer of all — features the famous "Thoro-Mix" action that charges, mixes, and discharges all slumps faster.

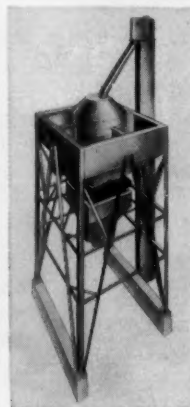
Large drum diameter, deep "L" section blades and a progressively increasing blade slope are drum design features that make for more thorough mixing, more positive discharge, and a greater ability to handle stiff, low slump mixes.

Transcrete's time saving efficiency means more trips per day as mixer or agitator.

Quality construction and simplified rugged design assure trouble-free life.

Transcrete offers you the choice of a profit making size at the price you want to pay.

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CMC's Multiplex Bins fill a long apparent need for a more compact, lower-in-height bin for central plants and many other installations.

They are available in unit construction 16' square — 2, 3 or 4 compartment, 100 or 150 ton, with or without 125 or 175 bbl. center cement compartment, elevator or conveyor.

Interchangeable legs and braces make ground assembly quick, easy. They can be erected in just a fraction of the time usually required.

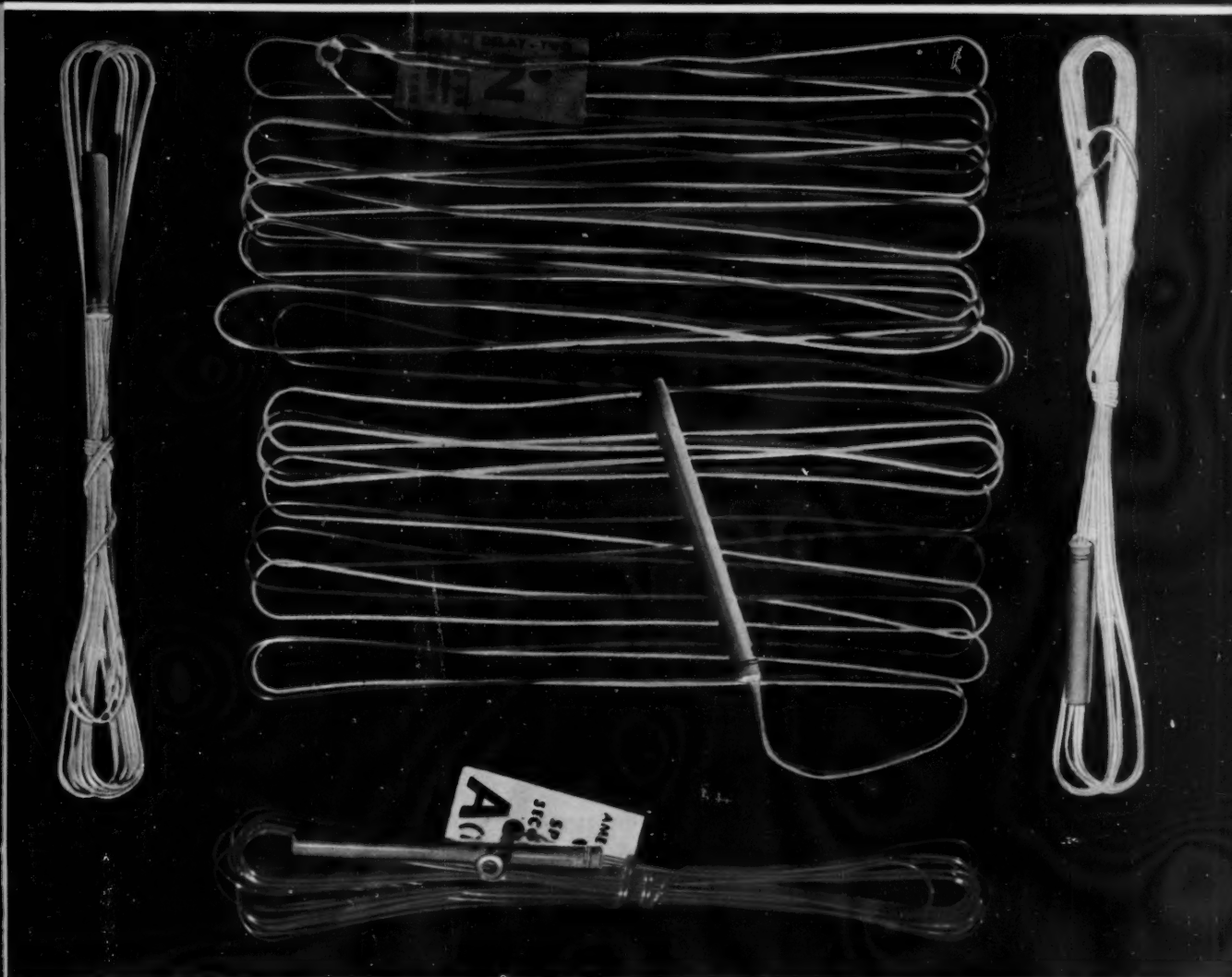
Batchers are available in 1, 2, 3, 4 or 6 yard sizes with or without cement compartment.



Other Outstanding Batching Equipment

CMC also has Bin Batchers for smaller jobs; cement bins, cement batchers, manual or automatic; automatic water weighers; conveyors and elevators to fit into your present plant.

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Superior insulation featured in
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Cyanamid has for many years been conducting a study of all materials available for blasting cap wire insulation to find one that would offer uniform concentricity—no thin spots. Every type of insulation currently in use has been tested, as have many new materials. Now Cyanamid has an insulation that gives *uniform concentricity*, assures maximum performance!

This new, organosol plastic insulation is applied to wire by a continuous bath method. The wire is dipped in *seven separate baths* and is passed through dies to scrape off excess coating between baths.

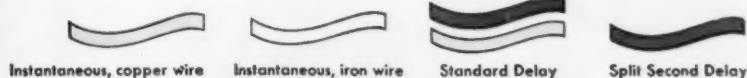
Each coat is heated to insure perfect set, perfect concentricity. Organosol plastic insulation, because of its uniformity, gives you:

- | | |
|---|--------------------------------|
| 1. Greater electrical insulation values | 3. Greater abrasion resistance |
| 2. Greater flexibility | 4. Non-porosity |
| | 5. Greater moisture resistance |

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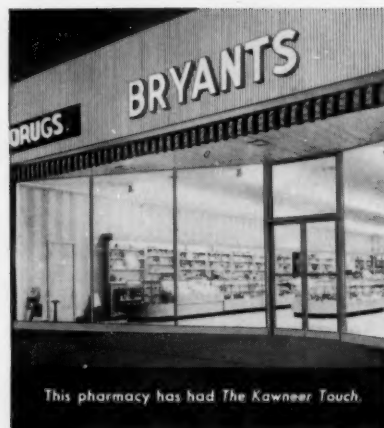
The Kawneer Company, leading designer and producer of store front materials, doors and entrances, colored Zourite facing and sun-control products has a plan to increase your profits during 1954. Called the "Kawneer-Contractor Plan," it will show you how you can keep crews busy during the so-called "Off Season," while enjoying greater building activity and profits.

The "Kawneer-Contractor Plan" will tell you how superior Kawneer products, applied with the inimitable skill of a factory-trained Kawneer Installing Dealer combine to provide your clients with *The Kawneer Touch* . . . the hallmark of customer satisfaction in store and building fronts. And it will tell you how the specialized job of store front installation is handled without worry or problems for you . . . only profit.

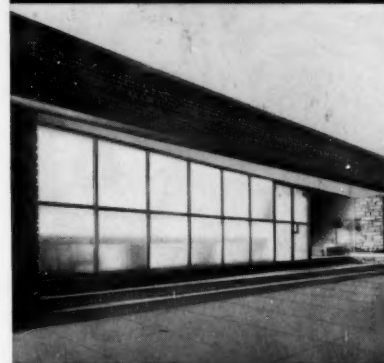
Your favorite Kawneer Installing Dealer will be pleased to call at your convenience and discuss the new "Kawneer-Contractor Plan." Find him listed in the yellow pages under "Store Fronts."



Look for the Kawneer pages
in Sweet's Light and Heavy
Construction Catalogs.



This pharmacy has had *The Kawneer Touch*.



This Kawneer factory job made
contractor profits.



Typical Kawneer grocery modernization.



Kawneer will help you do jobs like this.

» **REDEVELOPMENT** of 52 slum areas in 32 cities for which federal loans and grants have been approved is expected to result in a construction outlay estimated at almost \$500 million, Administrator Albert M. Cole of the Housing and Home Finance Agency said last month.

These 52 areas constitute about one-third of the slum areas that are in or near actual development stage by local slum clearance and urban redevelopment programs.

A breakdown of the estimated \$497 million outlay by type of construction shows:

- \$257.7 million for private housing and \$13.6 million for public housing.
- \$53.5 million for commercial construction.
- \$48 million for industrial construction.
- \$107.7 million for public and semi-public construction with \$79.1 million in the project areas, and \$28.6 million for supporting facilities outside the areas.
- \$16.7 million for site improvements.

The estimates are shown in a year-end report to Mr. Cole from J. W. Follin, director of the Slum Clearance and Urban Redevelopment Division, HHFA, and are based on data supple-

Redevelopment of Slum Areas Calls for \$500 Million Outlay

- One-Third of Projects Are in Development Stage
- Public Facilities as Well as Housing Planned

menting local public agency applications for federal assistance under the Housing Act of 1949. Applications for 53 local slum clearance projects have been approved as of December 31, 1953, permitting the local public agencies to commence land acquisition and clearance with the assurance of federal assistance for financing interim expenditures and for meeting part of the net costs.

In one of these 53 projects the data are not definite enough to permit inclusion in the construction outlay estimated above. Seven additional projects are financing initial project development activities with local funds until loan and grant applications are completed and approved.

Progress Being Made

Substantial progress made during last year in eliminating slums is shown in Mr. Follin's report. The report shows that by the end of 1953 there were 32 slum areas in 25 cities in

which demolition was under way; 28 other projects in 21 cities for which land acquisition and clearance have been approved; and 94 others in 79 cities in which final plans are now being prepared.

Capital grant reservations for the participating localities now total \$246 million, or approximately one-half of the \$500 million authorized by the act.

Status of Approved Assistance

The status of federal assistance approved for the localities which have programs under the act, which authorizes \$1 billion in loans and \$500 million in capital grants, was as follows at the first of the year:

1. Capital grants totaling \$105 million had been approved for 53 projects, with \$8.7 million already disbursed to seven projects.
2. Temporary loans of \$104 million had been approved for 40 projects. Of this amount, \$30.8 million had been disbursed for 21 projects. Federal loans are unnecessary for 13 projects for which sufficient state and local financing was assured before land acquisition was commenced.
3. Money for planning projects had been approved amounting to \$9.9 million. Of this amount \$7.6 million had been disbursed.
4. Of loans and advances disbursed, \$10.9 million had been repaid by local public agencies as projects moved ahead. The bulk of this repayment represents refinancing of temporary loans through the sale of notes to banks and commercial investors, thus enabling land acquisition expenses to be financed at interest rates much lower than those required on borrowings from the Treasury.

Health and Safety Codes

During the last half of 1953 federal assistance was approved only after the HHFA was satisfied that the applicant was enforcing its codes or regulations as to health, safety and sanitation and on a showing that rehabilitation was not feasible in the project area covered by the application.

Concealed Radiant Heat Moves "Up Stairs"

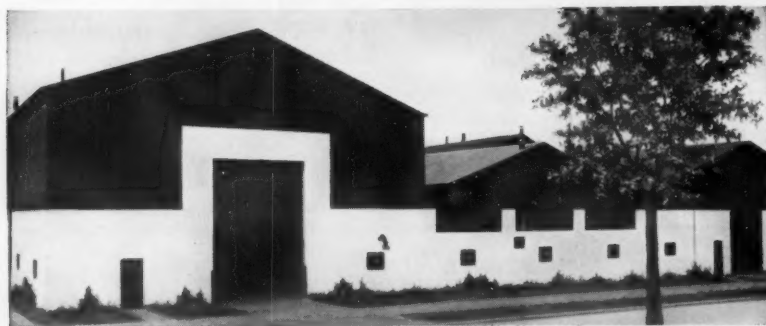


Concealed radiant heating, once confined to one-story buildings, is now being adapted to heat multi-story structures. Above, under construction, is shown Vermont's new state hospital for mental patients in Waterbury. Working on the second floor, the men are installing some of the 23,000 ft. of heating pipe which will go into the building. Radiant heating of this type conserves space, combats drafts and eliminates bulky radiators.



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Housing will be the principal reuse in 84 projects or more than half of the total, according to plans of the local public agencies. Some residential reuse is also planned in 11 additional project areas in which other uses will predominate. Data from local public agencies covering 85 of the 95 projects indicate that 51,000 new dwellings could be built on the land designated for residential reuse under proposed density standards. It is expected that at least 93 percent of the new housing units will be built by private developers, with about five rental units contemplated for every two sales units. Public housing will be predominant in only two projects but some public housing is planned in a subordinate role in eight others.

The redevelopment proposals recognize that all or portions of some of the project areas are more suitable for commercial, industrial, or public uses than for residential redevelopment; thus, non-residential uses will be predominant or exclusive in 70 project areas. Such areas, however, to qualify for federal aid, must have been slum or blighted areas predominantly residential in character prior to clearance. Industrial redevelopment will be the predominant or exclusive in 29 areas, commercial in 27 areas, and non-residential public in 14 areas.

Housing Is Dominant

In most of the project areas in which housing will predominate, there will also be some non-residential such as neighborhood shopping centers and public facilities such as playgrounds, clinics, and schools. Some of the larger residential projects are also expected to provide land for redevelopment for warehouse and light industrial areas.

The estimated federal capital grant requirements for the 154 delineated projects aggregate \$196,000,000. Local grants-in-aid in the form of cash, donations of land, site improvement and clearance work, and supporting facilities will be provided by the localities at a cost of \$110,000,000 to make up the balance of the over-all net project costs, or deficits, aggregating \$306 million.

This deficit, amounting to about two-thirds of the gross costs of the projects, reflects the high cost of assembling slum property, clearing the land, and providing the streets, utilities and other improvements.

B.R.A.B. Expands Research

The Climatic Research Committee of the Building Research Advisory Board met Feb. 5 in Washington, D. C., to determine how the Weather Bureau can be of more assistance to American industry, including construction, by making its weather reports available to a larger number of businessmen.

Dr. Francis W. Reichelderfer, chief of the Weather Bureau, told the committee that his office is anxious to find out if the agency's weather reports are proving practical and useful in business.

Committeemen representing technical groups, including the A.G.C., stressed the need for more weather information to improve the design of equipment, materials and structures.

Speaking for the A.G.C., Welton A. Snow, national staff, said that most weather data already available appears sufficient to serve the needs of general contractors. He added, however, that some contractors probably are not aware of the bureau's services, or may not wish to take weather conditions into account when figuring work.

Mr. Snow is planning to survey informally some A.G.C. members, especially heavy contractors, to determine to what extent the bureau's weather forecasts are used, and if they prove satisfactory.

Tropical Housing

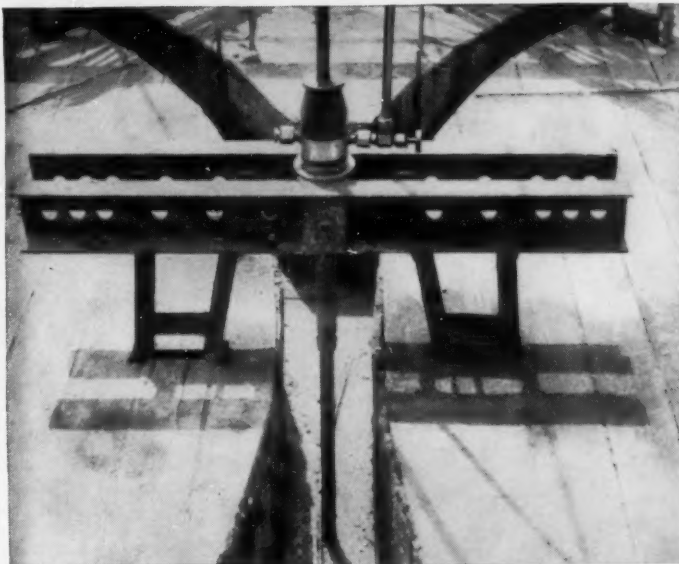
In January the B.R.A.B. Committee on Tropical Housing and Building met and agreed to publish a bibliography of important technical literature printed in the English language on housing and buildings designed for warm climates. Specific phases of the project were listed and assigned to different committeemen.

Documentation Conference

At a recent meeting of the B.R.A.B. Conference of Building Documentation members agreed that the techniques of documentation have "been thoroughly developed both in this country and abroad. There was, however, a difference of opinion when members began to consider the kind of information to be contained in a building documentation service.

After hearing general remarks by principal speakers, the committee broke up into groups to study four areas of building documentation techniques.

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Publications on Building

Recent publications of interest to building contractors include a pamphlet on modular coordination, a handbook about reinforced brick masonry, and a comparison of different types of mortars.

The Housing and Home Finance Agency recently published "*Basic Principles of Modular Coordination*," a new pamphlet on the subject for students and architectural and engineering draftsmen. The booklet begins with a description of the basic module and defines modular volume, dimensions, modular masonry, modular coordination, framing, and modular products.

Illustrations and text are based on the American Standards Association's A-62 Guide for Modular Coordination. Copies are available from Government Printing Office, Washington, 25, D.C., for 25¢ each.

The first complete handbook on the use of reinforced brick masonry in construction has been published by the Structural Clay Products Institute. The volume, *Reinforced Brick Masonry and Lateral Force Design*, is by Harry C. Plummer, Director of Engineering and Technology for the Institute, and John H. Blume, West Coast structural engineer.

In reinforced brick masonry steel reinforcement is used so that the masonry will have increased resistance to lateral forces. The principles and design formulae are similar to those for reinforced concrete. The book is designed to fill a need for technical information for architects and engineers.

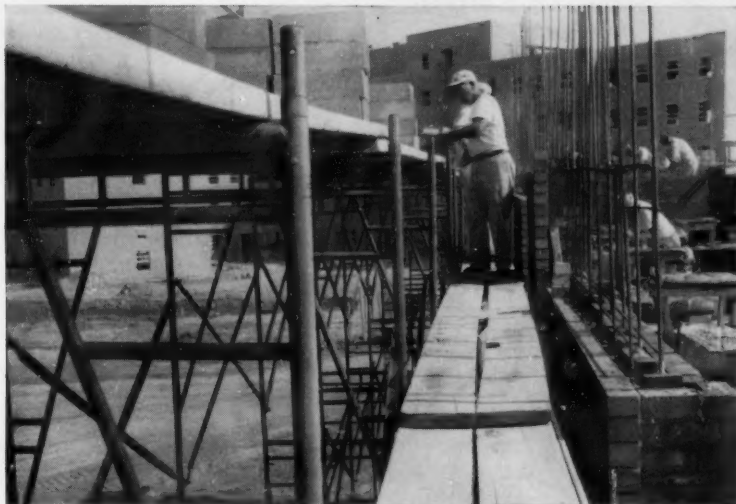
Copies are available at \$4.95 from the Institute, 1520 18th St., N.W. Washington, D.C., and regional offices.

Studies of Stone Setting Mortars, by Daniel W. Kessler and Ross E. Anderson, has been published as National Bureau of Standards Building Materials and Structures Report 139. The report gives an account of studies of several mortars with respect to their bonding strength to four types of stone, dimensional changes under three storage conditions, and frost resistance.

It also reports on studies of mortars in structures and gives certain recommendations for selection of mortars for use in stone masonry. Copies available from Government Printing Office, Washington, 25, D.C. Cost is 20¢.

THE CONSTRUCTOR, MARCH 1954

Hang it, Build it Up, or Roll it to the Job; The Modern Steel Scaffold Meets All Needs



BUILT-UP FOR MASONRY WORK, this "Trouble Saver"® Sectional Steel Scaffolding speeds construction on the new Veterans Administration Hospital, Sepulveda, Calif. 3000 of the 6'6"-high, 5'-wide "Trouble Saver" frames were rented and erected by general contractor Gust K. Newburg. 20"-wide sidewall brackets support the adjustable mason platform; put men within easy reach of materials. "Trouble Saver" Scaffolding, distributed by PS Co. on a rental or sale basis, is described in free Bulletin PSS-24.



HANGING SCAFFOLDS were used at the Bromley Park Housing Project, Roxbury, Mass., by general contractor M. S. Kelleher Co. 5 ft.-wide "Gold Medal"® Safety Scaffolding Machines provided a safe, unobstructed, adjustable working platform. 180 machines were used. "Gold Medal" Junior Safety Swinging Scaffolds are often used for washing down brickwork. For details on both types of Scaffolds, ask for Bulletins SS-1 and J-6.

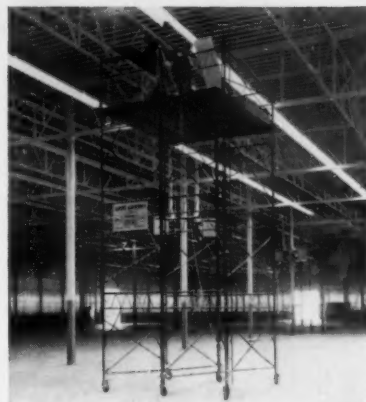
THESE PRACTICAL EXAMPLES of PS Co. Scaffolding providing safe footing for construction workers are typical of PS service. No matter where the job is located, the *right* scaffolding is quickly available from Patent Scaffolding Co. Whether the job is simple and small or goes steeplehigh; involves uneven terrain or requires mobility, contractors can always rely on PS—the only complete line. It pays to remember—when it comes to scaffolding, come to PS.

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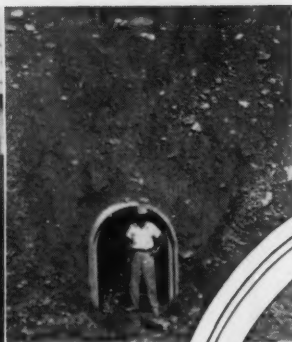
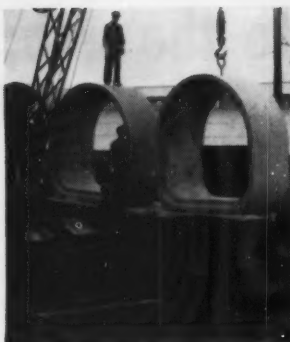


ROLLING SCAFFOLDS ARE "DOLLAR SAVERS", according to J. B. Shamel of California Electric Construction Co., who used 25 of these "Trouble Saver" Rolling Scaffolds to expedite overhead installations at North American Aviation's El Segundo plant in California. For details on dozens of time saving uses, request free Bulletin PSS-14.



ENCLOSING A FAMOUS EDIFICE, these erectors are installing "TubeLox"® Scaffolding for repair work on New York's famous Grace Protestant Episcopal Church. 31,612 lineal ft. of tubing and 5,828 couplers were used. "TubeLox" Scaffolding can be built-up to almost any height, conforms to any contour. Ask for free Bulletin 10-PTS.

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» SINCE September of 1953, upward of 65 handicapped "children"—ranging in age from 3 to 27—have been receiving the full benefit of an achievement that may well be unique in American industry. It is most certainly unparalleled in the history of the Denver, Colorado, area.

Actually, the story begins some seven and a half years ago—in July of 1946—when a group of about 40 mothers of children attending the Cerebral Palsy Clinic at Denver's nationally known Children's Hospital organized themselves into the forerunner of the United Cerebral Palsy Association of Denver, Inc. Actually, the national organization, United Cerebral Palsy Associations, Inc., was not formed until 1950, and when the original Denver group affiliated itself with the national a year later, its membership had grown to a total of 275.

Meanwhile, in the fall of 1947 the Denver group had succeeded in setting up a small school for cerebral palsied children, which operated in the Trinity Methodist Church, with an enrollment of 16 children. By the 1952-1953 school year, enrollment had increased to 33. Classes during the first few months of that year were held at Globeville Center, but were moved to Messiah Lutheran Church in January, 1953.

Need for School Cited

For two fundamental reasons, as early as the end of 1951 the Denver C.P. Association became convinced that a school designed and built specifically for the care, training, and treatment of affected children was essential

Denver Construction Industry Builds Cerebral Palsy Center

- Donates Labor, Materials, Services to Community
- A.G.C. Chapter Spurs Project to Completion



Main entrance to new building before sodding. The auditorium is to right, and kitchen facilities beyond. Offices are to left of entrance, and classroom wing extends considerably farther to left than shown in picture.

if any real progress was to be made. First of all, through the work of the national group and an ever-growing number of local affiliates such as Denver, not only parents of handicapped children but the public generally was being educated to the results that can be achieved by proper handling of each individual case.

Secondly, there was in Denver no facility suited to the particular needs of the C.P. child, other than at the already overtaxed Children's Hospital,

where treatment was more or less confined to medical and therapy, and education could not be provided. The Denver Public School System, with expansion and financing problems of its own, was in no position to provide a school restricted to cerebral palsied or other handicapped children.

A.G.C. Chapter Approached

It was on April 28 of 1952 that the Denver General Contractors Association (Colorado Building Chapter, A.G.C.) first heard word of the Denver C.P. group's dream of a school of its own. On that date, Monte Green, a C.P. Association member and an engineer at that time employed by the A.G.C. member firm of Marye-Northwestern, called on A.G.C. Chapter President Gerald H. Phipps and told of the efforts being made to turn the C.P. dream into reality.

At that time, a Denver architect, Carl F. Bieler, had been approached by a C.P. member, Max Leishin, and asked for assistance in the design of a school able properly to care for up to 120 handicapped children. Mr. Bieler had most generously indicated that he would request but a modest fee for such services, and that if similar donations could be secured from other groups and individuals, he would consider preparing the necessary plans



Here is shown a typical class in a typical classroom of the new school. Note specialized equipment required, and inserts in the asphalt tile floor which have proved of educational as well as decorative value.

and specifications at no charge whatever.

A few of the more important building trades unions had also been approached, and had indicated that support might be expected from that quarter. Would the A.G.C. be able to help?

Contractors' Response Immediate

At Mr. Phipps' suggestion, a formal request for assistance was written to the Colorado Building Chapter by Mr. Alan Longstaff, President of the U.C.P. of Denver. It so happened that the May 7th meeting of A.G.C. was one of the three each year that included not only the regular membership, but the affiliate (subcontractors) and associate (material suppliers, etc.) memberships as well, and Mr. Longstaff's letter was read to that meeting by President Phipps.

On discovering far more than the expected interest evidenced by those in attendance, volunteers were called for a committee to spearhead a drive to assist Denver's C.P. group in its construction program.

Response was immediate, and within three days the Denver General Contractors Association was equipped with a Cerebral Palsy Building Committee. Chairmanship of this new group fell to John Tamminga, a regular and long-time A.G.C. member operating his own general contracting firm. Balance of the committee membership consisted of Max Morton—a member of the Denver C.P. Association—of the regular member firm of N. G. Petry Construction Co., J. A. Schrepferman of Brown-Schrepferman & Co., E. B. Jones, Jr., of A. A. & E. B. Jones Co., Past-President James R. Howell of James R. Howell & Co., Jack LaRock of Swinerton and Walberg, Bob Kenney of James B. Kenney, Inc., Harry E. Short of the Harry E. Short Tile Co., and Frank P. Spratlen, Jr., of Ready Mixed Concrete Co. Mr. Spratlen was also at the time a member of the Denver School Board. William S. Hibberd, secretary-manager of the chapter, served as committee secretary.

It was the consensus of the association that its efforts should be directed toward assuring construction of the

cerebral palsy school at no cost whatever to the Denver C.P. group.

Contacts with local unions affiliated with the building trades, solicitation of dealers in essential materials, and approach to trade organizations and firms in subcontracting and specialty fields followed in rapid succession, and about 10 weeks after the May meeting of the chapter, the Cerebral Palsy Building Committee was able to report to the association Executive Committee that everything appeared in readiness for the start of construction.

In that short time, not only had outright donations of both cash and materials been promised by individuals and firms in the industry, but local unions had given their full and unqualified support—some by appropriations from the union treasury, some by the promise of labor to be furnished by unemployed and retired members at union expense, and some—notably the carpenters—by an assessment levied against the membership, with proceeds to be used to pay regular hourly rates to its members employed on the C.P. project.

Much More Than Cash Donated

It appeared that the most appropriate donation that could be made by the Colorado Building Chapter would be cash to be used to cover the salary of a full-time superintendent-coordinator and to take care of miscellaneous and sundry jobsite overhead. A budget of \$6,000 for these purposes was set up by the committee, and the chapter Executive Committee promptly pledged itself individually and collectively to raise not less than this sum from A.G.C. members.

Actually, when the school went into operation, cash contributions from A.G.C. members totalled some \$7,200, to say nothing of donations of material, loans of equipment, and furnishing of services on which it is impossible to set a dollar value.

Chapter Employs Supervisor

In view of his qualifications as construction superintendent along with his deep personal interest in the program, Monte Green was employed by the committee to supervise and expedite the job, and he remained in that capacity until completion of the building. To him fell the immediate responsibility for seeing that necessary materials and manpower were on hand to keep

(Continued on page 69)



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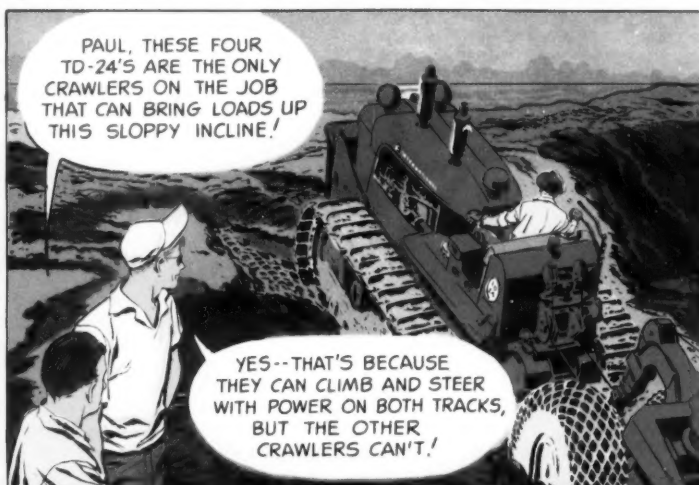
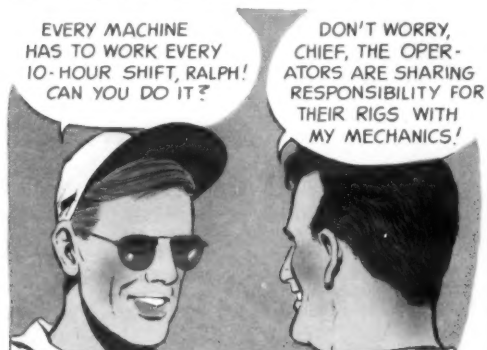
Big Red Power Play

Scores Against the Weatherman

An Actual Job Report from



CONTRACTOR CRAWLEY AND MASTER MECHANIC RALPH DEVAULT COMPLETE THEIR PLANS...



CRAWLEY PUSHES RIGHT THROUGH THE WET SEASON, AVERAGES AS HIGH AS 14,600 CU. YDS. ONTO THE LEVEE PER 10 HOUR SHIFT.

WE'VE CHECKED AND RECHECKED OUR MEASUREMENTS, PAUL, AND YOUR DIRT MOVING FIGURES ARE ABSOLUTELY CORRECT! I DON'T SEE HOW YOU DO IT WITH SO FEW MACHINES!



HERE'S HOW, INSPECTOR! 27-YARD HEAPED LOADS... FAST LOADING TIME... AND TD-24'S THAT NEVER QUIT!



AND ON THE SIXTEENTH OF OCTOBER...

HERE'S THE WORD, MEN! WE'VE NOT ONLY CAUGHT UP-- WE'RE FINISHED EIGHT DAYS AHEAD OF SCHEDULE, THANKS TO YOU!

DON'T FORGET OUR TD-24'S, BOSS!

YEAH, MAN! YOU CAN'T BEAT FOUR "BIG RED" ACES!

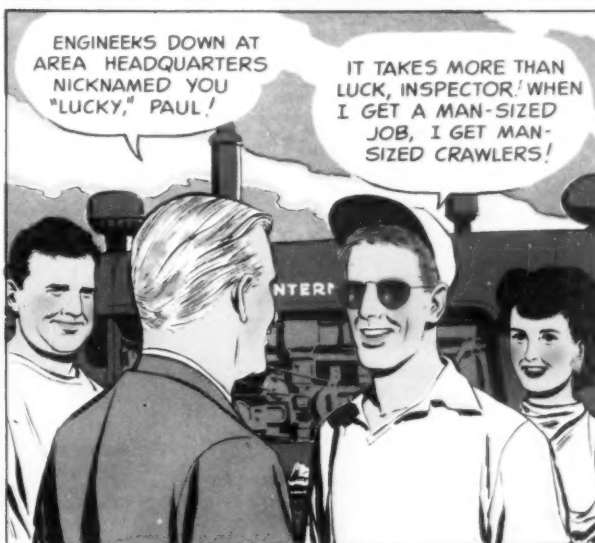


YOUR CREW SURE DESERVES A HEAP OF CREDIT, RALPH! YOU HAVE KEPT DOWNTIME TO A MINIMUM ON THIS JOB.

AND THOSE BIG RED BABIES REALLY MOVE THE DIRT!

ENGINEERS DOWN AT AREA HEADQUARTERS NICKNAMED YOU "LUCKY," PAUL!

IT TAKES MORE THAN LUCK, INSPECTOR! WHEN I GET A MAN-SIZED JOB, I GET MAN-SIZED CRAWLERS!



Meet the man they call "LUCKY"



Here's Paul Crawley, 32-year-old contractor from Edwardsville, Illinois and Clayton, Missouri. He currently (October, 1953) is working on five major levee contracts with the U.S. Army Corps of Engineers, totalling approximately 2,900,000 yards of dirt and \$1,300,000.

Paul says, "Yes, I know they call me 'Lucky', but you need more than luck to make up nine weeks lost by rain and floods! We made up that time in a little more than three months. We did it with a team of top operators and mechanics who used the right equipment for the job we had to get done.

"My four TD-24 tractors showed their true

worth when they kept right on working in the rain, climbing slippery levee slopes with heaping scraper loads... a job that caused our other tractors so much trouble we had to use them elsewhere. In one clocked 13-day period, we moved 197,700 cubic yards of dirt. TD-24 performance was a tremendous factor in helping us set this record."

By using the best in earthmoving equipment, by hedge-hopping in his two planes and by using a powerful FM radio with two-way phones in all his superintendents trucks, Paul not only kept this project rolling—he made the dirt fly on four other levee jobs at the same time!

INTERNATIONAL HARVESTER COMPANY, CHICAGO 1, ILLINOIS

**POWER TO MOVE
THE EARTH**



INTERNATIONAL

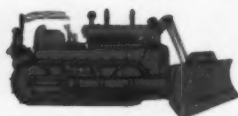
**Meet the complete INTERNATIONAL line,
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TD-24 crawler with matched scrapers



TD-18A crawler with matched scrapers



TD-24 crawler with bulldozer



TD-14A crawler with cable bulldozer



TD-9 crawler with hydraulic bulldozer



T-9 crawler with hydraulic bulldozer



TD-6 crawler with hydraulic bulldozer



T-6 crawler with hydraulic bulldozer



Model 2T-75 two-wheel, rubber-tired tractor
with 18 heaped-yard capacity scraper



Model 2T-75 two-wheel, rubber-tired tractor with
20 heaped-yard capacity bottom dump wagon



Model 2T-55 two-wheel, rubber-tired tractor
with 13 heaped-yard capacity scraper

S LOANE QUANTITY SURVEYS FOR ALL CLASSES OF CONSTRUCTION

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PUBLIC RELATIONS

(Continued from page 64)

construction moving, while the committee, meeting at least once each week at the jobsite, saw to it that no loose ends were permitted to delay progress. It is difficult indeed to conceive the problems involved in an operation of this sort, and quite understandably, actual construction could hardly proceed at a normal pace.

The last months of 1952 saw the building out of the ground, and on December 14 of that year the cornerstone was laid by a prospective pupil, assisted by the architect, while representatives of the various building trades and of the Denver General Contractors Association took part along with C.P. officials in the attendant ceremonies.

To attempt to go into detail regarding the headaches that became a standard feature of the committee's makeup during the ensuing months would be an endless task. The juggling of available funds in itself proved virtually a full time job. At one point it was necessary to submit to the Director of Internal Revenue a report of taxes withheld from employees without making actual payment of those taxes—there simply was no money in the bank. Far more than once Mr. Tamminga and his committee were on the verge of closing down operations, but each time someone would come through, take care of the immediate problem, and the job would go ahead.

Finally, during the summer of 1953 the building was completed and equipped, and immediately after Labor Day the Denver Cerebral Palsy Center opened its doors.

Chapter Eliminates Deficit

Still there remained loose ends to pick up. In early September, Mr. Tamminga came to the chapter Executive Committee with the report that a sum of nearly \$5,000 had been borrowed by the Building Committee from C.P. Association general funds in order to meet obligations resulting from the failure of one local union and one association of specialty contractors to meet original promises.

It was the feeling of the Executive Committee that, since the Denver General Contractors Association had more than fulfilled its commitments, the building should be delivered to the C.P. Association, the Building Committee should be discharged with ap-

LEADING CONTRACTORS USE McCarthy Drills



PUBLIC UTILITY AUGER DRILL

Bores holes from 4 1/2" to 24" in diameter under sidewalks, roads, building foundations, railroad tracks, landscaped grounds, etc. Fithian Contracting Co., Youngstown, O., using McCarthy Public Utility Auger Drills, completes pipe line jobs, formerly taking weeks, in a few days.



SELF-PROPELLED HORIZONTAL AUGER DRILL

Will bore 6" and 8" diameter holes 120 feet horizontally at rate of six feet per minute maximum. Four individual, self-locking jacks maintain correct drilling level. In one day a New Castle, Pa., operator bored holes of various depths totaling 840 ft. through shale and sandstone, using this McCarthy Auger Drill.

**Heavy-
Rugged
Powerful**



VERTICAL AUGER DRILL

Operating men who have made actual on-the-job tests find the McCarthy Vertical Auger Drill a standout for mobility, stamina, ruggedness and versatility. On a 2-million dollar, 5-mile stretch of superhighway between Hubbard, Ohio, and Sharon, Pa., The Apex Powder Co., Canton, Ohio, cut blasting costs approximately 20% as compared to air, well or churn drilling. Cutting through two large areas of concentrated rock, 150 holes 15 feet deep were bored for each blasting pattern. 3,000 cubic yards of sand rock were moved at each blast. Due to the ruggedness and mobility of McCarthy Drills, there was no time lost. For further information, write Salem Tool Co. and our distributor will contact you.



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SINCE 1901

THE SALEM TOOL CO.

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The Best Advertisement

In these days of intensive competition between contractors it is strange to see the best opportunities for advertising being ignored.

Granted that the average contractor is not an advertising specialist or a sales expert, nevertheless he is a businessman . . . and businessmen should recognize an advertising bargain when it bites them.

Delivered with every job is an honest-to-goodness, genuine, 100%, advertising blue-plate special. Less expensive and more effective than any space you can buy anywhere.



**Your Sign
on Your Job!**

It needn't be fancy, it needn't be overly large. It doesn't have to carry any message and it doesn't require fine print. All it needs is the name of your firm and, we think, the A.G.C. emblem.

And it does need fresh paint!

Of course, it is true that the majority of successful contractors do realize the good public relations effect of a clear, clean signboard properly placed. On plenty of other jobs, however, no signboard whatsoever can be found . . . or, perhaps, the sign which is in dingy evidence may be readable from 20 feet but no farther.

The value of a good sign on a busy construction job is tremendous, considering that possibly the only thing of greater interest to the passing public is a human-fly or a waltzing bear. Even compared to these, a building job has the edge in that it may make more noise.

Since membership in A.G.C. is selective and because it has been restricted to those who have built their reputations, it qualifies as a "prestige" organization. The A.G.C. emblem is intended to be and has proved itself a mark of the successful general contractor. To those who are not familiar with a member's name the emblem is identification that here is a reliable builder.

The combination of the two . . . the firm name and the A.G.C. emblem . . . make up your best advertising expenditure and one of the wisest investments of all.

—The Bulletin of the Kansas Chapter, Builders Division, A.G.C.

Cerebral Palsy School—Continued from page 69

propriate thanks, and that C.P. should be asked to assume the shortage.

The committee refused to take this answer, however, and actually asked permission to undertake on its own solicitation of cash contributions sufficient to meet the deficit. This permission was granted, and in mid-December a check was handed by John Tamminga to the new president of the Denver Cerebral Palsy Association wiping out the debt.

An almost impossible dream of less than two years ago is, therefore, now a reality, and the handicapped children of the Denver area have received

from the construction industry a gift that is without precedent.

Nor is the Colorado Building Chapter content to rest on its laurels. Newly elected president of the Denver Cerebral Palsy Association is Max Morton. Chairman of the Board of Directors of the same association is "Bud" Spratlen. Past Chapter President Gerry Phipps is a member of the Board and chairman of its Legislative Committee. John Tamminga is on the Cerebral Palsy School Board.

Not only the Colorado Building Chapter but the A.G.C. as well can take pride in a job well done.

A.G.C. Firms Win Advertising, Report Awards

» William Denny (left), executive vice president and general manager of Merritt-Chapman & Scott Corp., New York, accepts the bronze "Oscar of Industry" award from Weston Smith of *Financial World* for having the best annual report in the construction industry. It was the firm's third time to win the trophy. Morrison-Knudsen Co., Inc., Boise, Idaho, and The Fluor Corp., Los Angeles, both A.G.C., placed second and third.

» R. Hugh Daniel (left), partner in the Daniel Construction Co., Greenville, S. C. and Birmingham, Ala., received from Lionel Baxter, chairman of District 7, Advertising Federation of America, the district's second annual award presented at its annual convention in Nashville, Tenn. It is given "for the most outstanding job of advertising in the South."



*The COMBINATION makes
the outstanding TRUCK CRANE*

THE FINEST
CRANE

THE FINEST
CARRIER



REMEMBER it takes *two* major pieces of equipment to make a good Truck Crane! A Feature that may look fine in the crane isn't worth much if you can't get it to the job when you want it — because of Carrier trouble.

You aren't buying a "Crane" and you aren't buying a "Carrier"—it isn't a type of drive or a method of control you want. You are buying versatility in material handling ability, high output and the maximum in mobility. That's what makes money in a Truck Crane. When you are figuring on a Truck Crane, weigh *all* the advantages of the unit as a whole. The Northwest Truck Crane has been designed to produce full efficiency with any attachment—Crane, Shovel, Dragline or Pullshovel.

Don't overlook Carrier details and don't be misled by selling statements that "carriers are all alike" and that "the same people build them". You will find other equipment may be often referred to as "A Good Crane" but Northwest is universally recognized as a leader for quality both in Crane and Carrier. We'd like to tell you in detail why and where the Northwest Truck Crane and Carrier are better.

NORTHWEST ENGINEERING COMPANY

1502-8 Field Building, 135 South LaSalle Street, Chicago 3, Illinois

IF YOU'RE INTERESTED
in a Truck Crane, Truck
Shovel, Truck Dragline
or Truck Pullshovel let a
Northwest Man go over
Northwest advantages
and leave with you the
new Northwest Catalog
describing both Crane
and Truck.

NORTHWEST

SHOVELS • CRANES • DRAGLINES • PULLSHOVELS

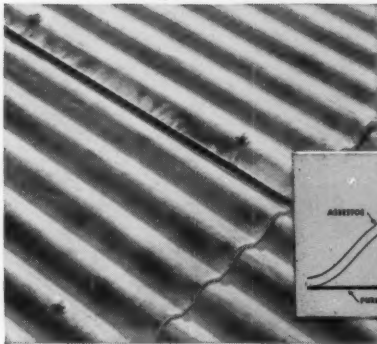


A BRAND NEW APPROACH TO CONSTRUCTION FASTENING THROUGH

K S M KORR-WELD STUDS

KSM KORR-WELD fastening methods, based on service-proved stud welding, simplify many construction applications. Fasteners become an integral part of the structure. They are strong, long-lasting, quickly and easily applied. Lower construction costs are the inevitable result of the unique advantages of Korr-Weld construction fasteners. KSM rolled threads provide extra strength and KSM precision-centered, solid flux assures a good weld every time.

FOR ROOFING AND SIDING FASTENERS...



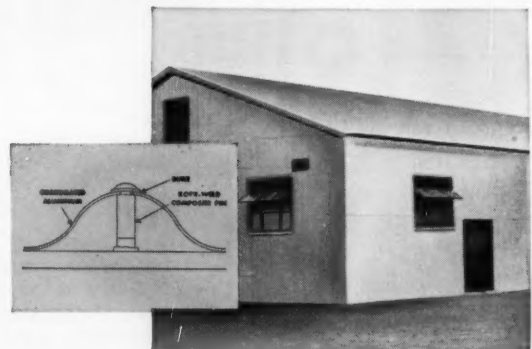
CORRUGATED ASBESTOS (Stud welding process 43.1)

This Korr fastening method is based on a welded stud designed on cantilever principles to give a high safety factor in tensile loading and provide a more ductile fastening. The Korr side lap fasteners are installed from outside, need no special tools.

CORRUGATED ALUMINUM (Stud welding process 45.1)

This method is based on a unique bi-metallic stud. Steel stud-base welds to steel structure. Aluminum stud-section holds aluminum roofing or siding. Integral stud locator and scraper speeds application.

Simple, quickly-installed, self-tapping screw secures side laps.



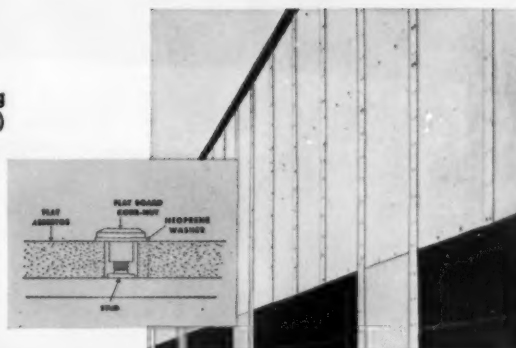
CORRUGATED STEEL (Stud welding process 44.1)

By stud welding, Korr-Weld Studs become an integral part of steel frame, making it one with the roofing and siding. Studs are quickly applied and corrugated steel is quickly riveted to studs; self-tapping screws hold side laps.

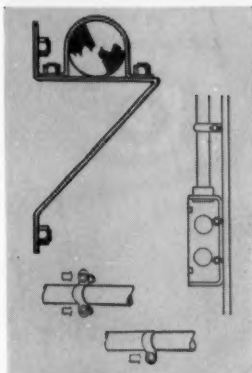
FLAT ASBESTOS AND INSULATION (Stud welding process 43.2)

KSM Korr-Weld method, quickly applied, provides strong, attractive fastening. Flat-head zinc-alloy Korr nuts secure material to studs.

Excellent also for curtain wall construction, fireproofing, metal lath installation, gunite reinforcement.



ELECTRICAL CONSTRUCTION



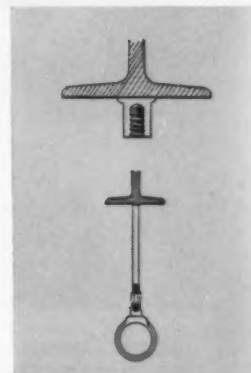
(Stud welding process 41.1)

KSM Stud welding to fasten conduit, wire ways and boxes. Method is fast, fastenings are secure. Eliminates detailed layout, drilling, tapping, throughbolting, and other expensive methods.

SPRINKLER AND PLUMBING INSTALLATION

(Stud welding process 49.1)

KSM Studs provide a strong and rapid method of hanging pipes from steel structures. Installations are neat, clean, low-cost.



HOW CAN YOU PROFIT FROM KSM KORR-WELD CONSTRUCTION METHODS?

A nationwide organization of application engineering is at your service to assist you in obtaining completely satisfactory results from the KORR-WELD method. Local distributors can supply studs and equipment as required.

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| <input type="checkbox"/> Corrugated Aluminum | <input type="checkbox"/> Sprinkler and Plumbing Installation |

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K S M
STUD WELDING

BETTER CONSTRUCTION
THROUGH
KSM STUD WELDING METHODS

CARBIDE INSERT? or MULTI-USE?



LOCATION: Sowerbutt Quarries, Inc., Prospect Park, N. J.

DRILLING CONDITIONS: Deep toe holes through New Jersey trap rock.

TIMKEN® carbide insert bits drill 31-foot holes in trap rock with only 1 change of bit sizes

THE experience of the Sowerbutt Quarries, Inc., shows how Timken® carbide insert bits can cut drilling costs on extra-deep constant-gage holes, especially in hard, abrasive ground, where high speed is desired.

Switching to Timken carbide insert bits brought Sowerbutt Quarries greater production at lower overall drilling costs. But these bits are *not* the best bet for every drilling problem.

For ordinary ground, Timken multi-use bits are most economical. With correct, controlled reconditioning, they'll save you money wherever full increments of steel can be drilled.

Whichever type of Timken bit you use on a job, you won't have to buy new steels just because you have different drilling conditions on the next job.

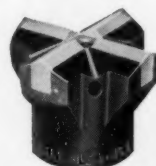
There are many types of Timken rock bits that are all interchangeable on the same drill steel. You can quickly switch from one type to another in the same thread series, right on the job!

With Timken rock bits you get the added benefits of:

1) the Timken Company's own electric furnace fine alloy steel, 2) special shoulder unions that protect threads from drilling impact. For help in selecting the best type of bits for a job, write The Timken Roller Bearing Company, Rock Bit Division, Canton 6, Ohio. Cable address: "TIMROSCO".



Timken threaded multi-use rock bit



Timken threaded carbide insert rock bit

your best bet
for the best bit
... for every job

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

» **TWO-WAY RADIO** is saving time and money for Arcole-Midwest Corp., Evanston, Ill., road and bridge contractor.

The firm has one permanent radio installation which links its headquarters in the Chicago suburb with jobs in the vicinity. At present, the company is at work on 15 contracts in the Chicago metropolitan area, including one for grading, paving, drainage, and bridge construction on a section of the Congress Street Superhighway. This operation is some 30 miles from Arcole's main office.

Two other transmitters have been purchased for what Arcole-Midwest Vice President Ernest Bederman calls "our work in the bush." As one job is completed and another gets underway, these small compact units are easily shifted to the new scene of operations. Last summer, one transmitter coordinated and expedited a 26-mile widening and resurfacing job in southern Illinois. This unit is now in storage, awaiting its next job. The other transmitter is being used in connection with a 10-mile New York State Thruway contract near Schenectady.

A Typical Illustration

One of the best illustrations of two-way radio's value in the day-to-day operations of a construction company occurred last summer on Arcole's southern Illinois highway contract.

At one end of the job, a bulldozer towing an earthmover broke down. Within a few minutes, a maintenance shop mechanic, contacted via radio by the foreman, was on his way. But before reaching the bulldozer, the mechanic ran into trouble of his own—

Two-Way Radio Pays Dividends to Highway-Heavy Contractor

By Phil Hirsch

the fanbelt on the engine of his pickup came apart. The mechanic immediately sent a distress call back to the garage, and within 10 minutes had a new fanbelt. Within another 10 minutes, he was at work on the 'dozer.

About the time the bulldozer was ready to be put back to work, a radio message came into the field office from a foreman at the other end of the project, requesting an extra bulldozer. He already had several 'dozers at work piling loose dirt. A scoop-shovel crane was loading the dirt into dump trucks. The foreman explained that, because of a rainstorm a few hours earlier, the 'dozers were sliding around. As a result, the whole operation was falling behind schedule.

The only 'dozer that could be spared easily was the one that had just broken down and was then being repaired. The engineer in the Arcole field office contacted the mechanic by radio and learned that he had just finished repairing the equipment. Then, by radio-checking with a foreman a few miles uproad from the point where the bulldozer had broken down, the engineer located one of the truck-trailers the firm uses to move its heavy equipment. Fifteen minutes later, the 'dozer, loaded aboard the truck-trailer, was heading for the other end of the project.

The whole operation, from the time the 'dozer broke down until it was

loaded on the truck-trailer, required about an hour. "Without radio, the job would have taken at least twice that time," according to Vice President Bederman.

Minimizes Spreader Breakdown

The money Arcole-Midwest has saved with its two-way radio installation is indicated by another incident that occurred on the southern Illinois job. The axle on a concrete spreading machine broke suddenly while seven trucks carrying concrete from the project batch plant were on the way.

"When a concrete spreader comes apart like that, it's normally a major breakdown that stops operations for at least a day," Bederman explained. "Also you lose more money because of the concrete shipped from the batch plant before the breakdown."

But, thanks to the two-way radio net, Arcole kept the cost of the equipment failure to a minimum. The maintenance shop was notified, and within a few minutes, mechanics, welders from an outside shop, and spare parts were on their way. The batch plant superintendent, told of the trouble, halted shipments to the spreading crew. Through further communication between the batch plant, a company engineer at the scene of the breakdown, and nearby section foremen, a schedule was worked out which enabled other concrete spreading crews



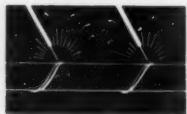
At left, Foreman Philip Petitclair is shown using mobile two-way radio unit in his pickup truck. Right, John Hughes, purchasing agent and stockroom manager, uses one of two remote-control microphones at main office.

YOU CAN'T DIG A TUNNEL WITHOUT IT



Ventilation is one of the ingredients you can't do without in underground construction. And when it comes to dependable push-pull ventilation, you can't beat lines of Naylor light-weight pipe. Naylor pipe is easy to handle—easy to install, particularly with Naylor Wedge-Lock couplings, the quickest possible connections. Naylor pipe is also made for "high air" and water lines.

Write for Bulletin No. 507 on line pipe and Bulletin No. 514 on Wedge-Lock couplings for vent pipe service.

NAYLOR  **PIPE**

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MANAGEMENT

to absorb the seven truckloads of concrete.

Two hours after the breakdown had been reported, the concrete spreader was back in action. It had been an expensive two hours, idling a 35-man crew and hampering or stopping operation of about \$300,000 worth of equipment. "But the loss would have been a lot higher without radio," Bederman believes.

Enables Quick Job Check

Arcole's vice president feels that one of the most valuable benefits of the company's radio network is to keep management informed of job progress. "Before we had radio, it was often difficult to find out about a job quickly," he explained. "We'd either have to visit the job personally, talk to the foreman by telephone, or look at his job report. The foreman was seldom easily available by phone, and the other two methods took a lot of time. Occasionally, our job reports came in two days late, and reading two-day old reports in the construction business is like reading last week's newspaper."

Bederman and other front-office officials now use a remote control phone hooked up to the main office transmitter. The transmitter feeds into a vertical antenna attached, at an elevation of 250 feet, to the antenna of an Evanston commercial radio station, WEAW, which is located across the street from the Arcole office. With this system, management is in constant communication with all foremen and supervisors in the Chicago area. A similar remote control hookup has been installed in the maintenance shop. The transmitter, which is about the size of a filing cabinet, is located in the WEAW studio. Arcole pays the station a nominal fee for this space and for use of the antenna.

Prompt Material Orders

Much of the communication between the main office and the operations in the field is concerned with orders for material. Every afternoon, job supervisors send in their requests. Because of this system, late ordering, wasted paperwork, and job delays because of lack of materials, have been virtually eliminated.

The payroll office frequently uses the radio to rectify mistakes in an employee's timecard. Formerly when such mistakes were made in the field, it sometimes took hours to locate the foreman by phone. Now, the job is

accomplished in a few minutes by radio.

Aid in Case of Accident

Arcole's two-way radio network has played an important part in at least one job accident. Last summer, a man helping to excavate a drainage trench on the New York Thruway job fell into the trench. Word of the accident was radioed to the field office, which had a doctor and an ambulance from Schenectady at the scene seven minutes later. Although, as it turned out, the accident wasn't serious, speedy work like this could conceivably save lives in many types of construction accidents.

All three Arcole networks operate on a frequency of 27.35 megacycles. This is an FM frequency, which reduces interference to a minimum. Power output of both main and mobile transmitters is 60 watts, which provides communication at a distance of up to 35 miles. The permanent system includes 12 mobile units in three supervisors' cars and in nine pickup trucks driven by foremen and mechanics. The New York Thruway network, identical to the one used last summer in southern Illinois, consists of the transmitter and eight mobile units operated by supervisors, foremen, and mechanics.

Cost of all three systems was about \$25,000, according to Bederman. He added that the mobile transmitter-receiver units are priced at about \$700 apiece.

The Arcole mobile unit measures 15 inches wide, 18 inches long, and six and one-half inches high. It weighs about 75 pounds. The unit takes 15 amperes from a six-volt battery while the receiver is in operation, and 40 amperes at six volts while the transmitter is on. With a 12-volt battery, these current requirements are cut approximately in half.

The receiver load represents a constant drain on the battery and generator, but Arcole has not found it necessary to increase the size of batteries or generators in its vehicles, or to add extra power equipment to handle the higher load.

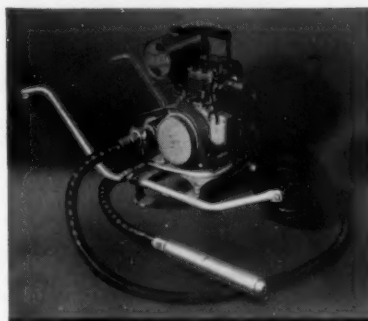
Motorola, and most other first-quality manufacturers of two-way radio sets, warrant their equipment for one year from the date of purchase. If parts fail during that time, they are repaired or replaced at no charge. Tubes are warranted for 90 days from the purchase date.

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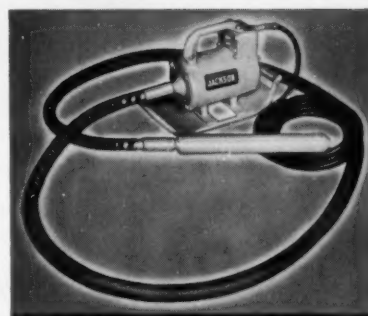
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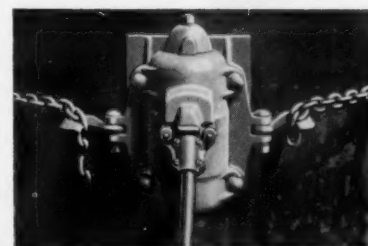
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with ...

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Case history
of CECO on-the-job
performance



HOW CECO JOIST CONSTRUCTION HELPED SAVE \$4.00 PER SQUARE FOOT

Erecting a building with firm footings in downtown Chicago clay is no simple task. Accomplishing that, plus cutting costs, is truly a stand-out feat.

Such is the story of the Remington Rand Chicago Office Building and the problem solved by Architects Bartlett, Watts and Rosene.

Analysis indicated that usual column spacings would impose excessive pressures on the subsoil, causing piles to drift. The solution: increase the distance between pile groups and spud every third pile.

But that created a problem . . . how to span the wider bays economically and keep the dead load on each pile group to a minimum. The architects knew Open-Web Steel Joists offered the lightest floor system, so called for their use.

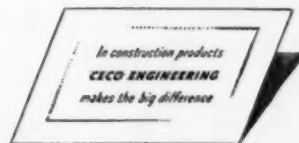
Conduit and air-conditioning ducts were run through the open webs, resulting in further economies.

"Being self-centering and requiring no shores, Steel Joists

were fast to erect," said Architect Harry Owen Bartlett. "Thus the contractor, J. L. Simmons Co., Inc., was able to pour slabs early, allowing masonry units to be stored on the floors and then laid up from inside, saving scaffolding."

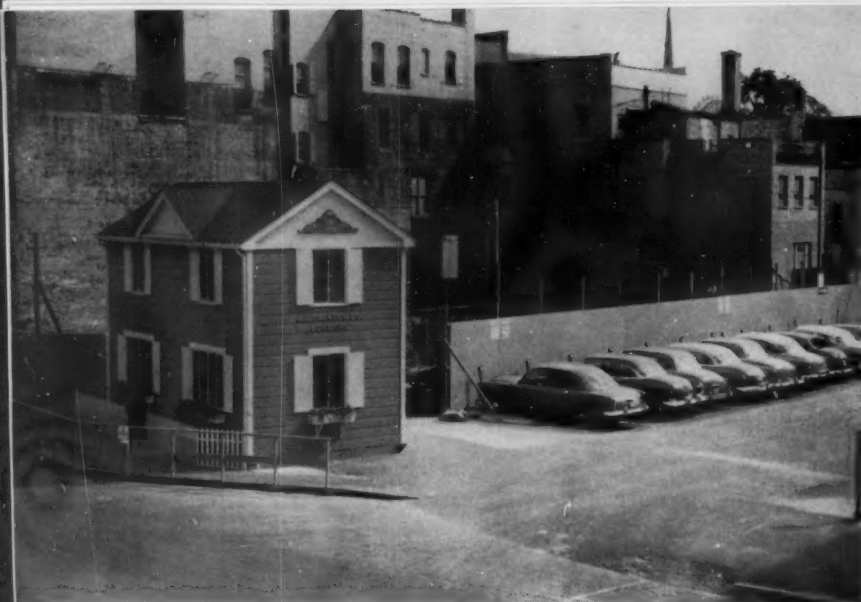
Total cost of the building was \$13.75 a square foot, compared to some comparable buildings costing \$17.75—a saving of \$4.00. Here is another example of Ceco performing on the architect-owner-contractor-supplier team.

Ceco Product Specialists will help you save through product engineering. So before you plan your next project, call your nearest Ceco office. Consult Sweet's file for address.



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Shanty office has flower boxes, painted shutters and white picket fence

Neat "Shanty" Suggests Good Housekeeping

To one Chicago A.G.C. contractor, safety begins at home.

Home in this case is an attractively painted two-story "shanty" replete with white shutters, window boxes with blooming flowers, and a neat appearance suggesting the handiwork of a proud housewife.

The proud "shanty," replacing the usual run-down, messy, and cluttered offices present on some construction sites, stands as a challenge and a reminder to the workers that good housekeeping is no accident.

This new approach to a thorny problem was first thought of by A. L. Jackson of the A. L. Jackson Co. (A.G.C.), Chicago building contractor, who believes that good housekeeping by management will make the workers practice it themselves. Appearing on this page are pictures

taken of a bank office building job site in Evanston, Ill., showing typical scenes of the program at work. To Mr. Jackson, safety interest must start at the top level if it is to be successfully carried out by the workers.

In addition to examples shown, the firm displays safety posters as a reminder that safe workers don't have accidents. Also, special tool guards are used for the protection of employees.

Good housekeeping by many has been defined as the "first law" of accident prevention in construction. Rubbish, debris, and waste material constitute fire and accident hazards and should be removed from the work area as soon as they accumulate. If this is done, then confusion will be reduced and operations will be more efficient in a work area that is orderly.

Workers pull nails and stack concrete forms as they are removed.



ACCIDENT PREVENTION



Concrete chutes are well braced.



Top-heavy tanks are chained upright.

Enforcing Safety Regulations

• Job Placement Physicals Called "Most Important"

By E. N. Ziner

Safety Engineer, John A. Volpe Co., A.G.C., Malden, Mass.

(EDITOR'S NOTE: This article is based on an address to the Construction Section of the 41st Safety Congress in Chicago, Oct. 20, 1953 by Mr. Ziner. It is the third of a series of five papers presented by speakers who stressed the engineering, education and enforcement problems of safety.)

» THE ENFORCEMENT of safety practices in building construction is a particularly difficult job, especially in areas where relatively few contractors have an organized accident prevention program. Any attempt at enforcement is weakened by the lack of teeth in the program.

There are no particular penalties that mean as much to a workman as the loss of his job. Then the enforcement is faced with having labor relations difficulties. Naturally, the enforcement of safe practices is dependent primarily upon the work that has been done in applying engineering and educational principles to the job.

If the engineering has been done properly and with safety in mind and the educational program has been conducted in a thorough manner, the enforcement of the safe practices is relatively easy.

Superintendents Object

The successful enforcement of safe practices in building construction must be done through the superintendents on the particular projects and their foremen. However, we have amongst our superintendents, at the Volpe Co., men who have grown up in the industry prior to the days of organized accident prevention work. Some of these men say to the safety engineer: "Accident prevention? Young man, what are you trying to tell me about construction that I don't already know?"

On the other hand, some of them practice accident prevention without ever knowing that they are doing it on a formal basis. It is through these people that enforcement must be maintained.

In order to promote the enforcement of safety practices on projects our

firm has set up a bonus system both for superintendents and foremen and we give away large sums of money annually for those men with the best records.

We are now considering the idea of a demerit system to take away from an original sum set up as a bonus with each serious violation of the company's safety code.

Many Reject Helmets

Because of prejudices established over the years in our area, there are only a few contractors in New England whom I have observed using hard hats, or similar helmets. Our company has just started to use hard hats but so far only on stripping operations. The use of these hats is not a widespread thing yet because not all men want to wear them all of the time.

However, since starting with a hard hat program we find that when the men have actually tried wearing them they like the idea of having a hard hat and having their heads well protected. Besides they find that the protective hat is actually a little bit cooler than the one they formerly wore.

Our hard hat program will not be completely successful until we can get the men to wear them at all times. When we reach that stage we will not have to have the men think to go get hard hats when they are going to do some stripping work. They will have the hats on anyway.

Migratory Workers

Another problem is caused by migratory workers going from one company to another even in a local area. Workmen coming to our jobs from firms that do not practice accident prevention make it difficult for us because we have to train them to follow our safety rules. I don't see any relief from a situation such as this until all contractors commence accident prevention programs on a formal basis. When this is done then the majority of the workers who go from one job to another will at least have had a smattering of safety work.

The final point I should like to con-

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INSURANCE—SURETY BONDS

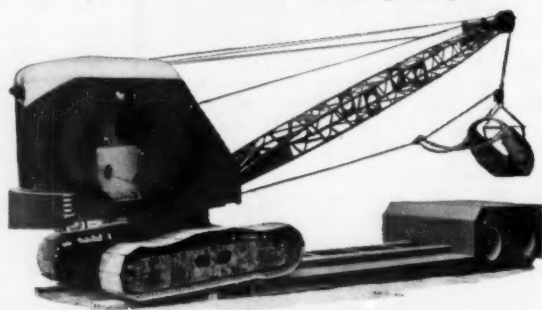
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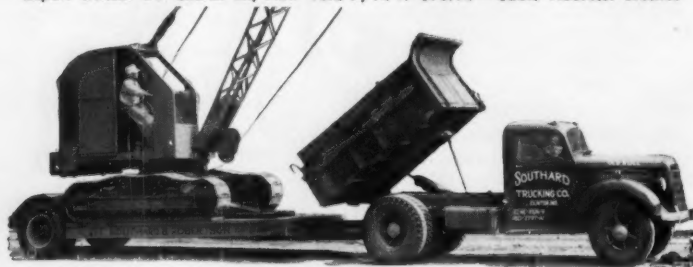
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Attaching of loaded Rogers Tagalong Trailer

ACCIDENT PREVENTION

sider and to me the most important of any of these tenets is the lack of job placement physical examinations in the construction industry.

Job Placement Physicals

Last winter in Kansas City the executive committee of the Safety Council's Construction Section voted on a resolution calling for standardization for job placement physicals in the industry. Certainly any enforcement program in construction is handicapped if men work who have physical disabilities but yet who are either unwilling or just foolish enough not to make them known.

How much good does it do to educate in safety a man who has a double hernia when later he may lift a load exceeding his physical ability and cause an accident perhaps hurting somebody who is helping him? As a matter of fact this phase of the enforcement program is by far the most important and until a solution is found to it that is practical we will continue to have a high rate of accidents.

Conclusions

In conclusion consider the five points which have been discussed and which affect the enforcement of accident prevention:

1. The education of key personnel.
2. Bonus plans to promote enforcement and possible demerit plans to give more emphasis to bonus plans.
3. Prejudices against use of safety equipment and against breaking of long established construction habits.
4. The shifting labor force.
5. The lack of job placement physical examinations in the construction industry.

Accident Picture Unchanged

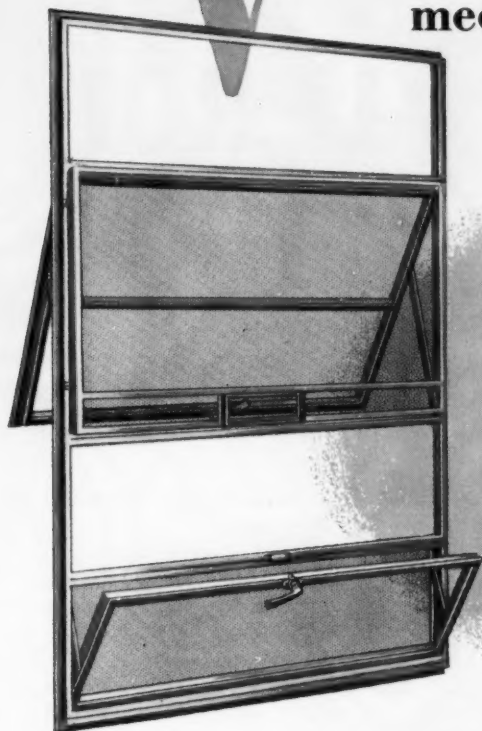
Preliminary estimates by the Bureau of Labor Statistics show that the 1953 work injuries in all industries held close to the 1952 rate despite a higher level of employment last year. Both figures were slightly over 2 million.

The estimates include some 15,000 deaths, 84,000 permanent disability injuries, and over 1.9 million temporary injuries.

Mining showed a substantial improvement in its injury record along with certain public utility groups. Construction, transportation and trade increased their number of accidents slightly.

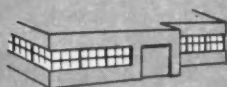
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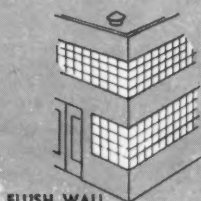


BAYLEY

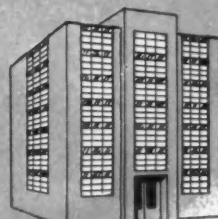
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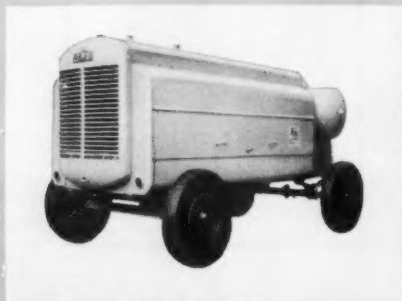
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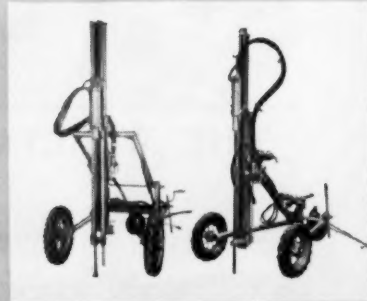
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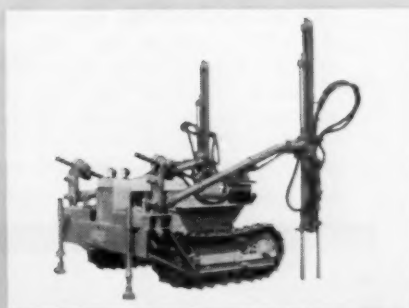


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A.G.C. Annual Report

To the 35th Annual Convention, Los Angeles, March 1-4, 1954

By H. E. Foreman

Managing Director, The Associated General Contractors of America

Introduction

The purpose of this report is, as tersely as possible, to give an account of the principal activities of The Associated General Contractors of America since conclusion of the 34th annual convention in Miami on March 26, 1953; to consider problems currently facing the construction industry; and to explore potentials of the future.

The future holds great opportunities for the American people, the construction industry, and the association.

The truce in Korea and the nation's altered approach to military preparedness make it possible to turn the productive potentials of the economy increasingly to peaceful purposes. A national environment which encourages individual initiative enhances those potentials.

The priority which had to be given to the demands of World War II and the Korean war has left great backlogs of construction work which is needed for the growth and development of the nation and its communities.

The vitality of the construction industry is demonstrated by the fact that after the last of emergency controls over construction activity were removed early last year, the industry during 1953 established another all-time record for the volume of work put in place. There are favorable factors for a continued high level of construction activity both now and in the future.

In January of this year the new Administration's program for a "stronger America" began to unfold in detail. Its concept of the government's responsibility in a free society is "to create an environment in which individual enterprise can work constructively to serve the ends of economic progress; to encourage thrift; and to extend and strengthen economic ties with the rest of the world," because "sustained economic growth is necessary to the welfare and, indeed, to the survival of America and the free world."

During the past year the association has continued its steady growth to its greatest size in history. Positive actions were taken on all major national developments affecting general contractors. Its policy has been consistently to take actions based on sound principles, without deviations for expediency, so that its work can be of maximum benefit to all members, to the construction industry, and to the public.

The future holds great possibilities for the nation to continue its growth and economic progress; for the construction industry to fulfill the nation's need for

facilities even more effectively than when major attention must be given to defense needs; and for the association to be of greater service to the industry.

Construction Markets

There are potentials for a continued high volume of construction activity with a dynamic national economy, a growing population, and the necessity to catch up with deferred demands.

In 1953 the construction industry established another record of total activity amounting to \$46.5 billion, composed of \$34.8 billion in new construction and an estimated \$11.7 billion in maintenance and repair operations.

The importance of this to the national economy is demonstrated by the facts that approximately one dollar in every eight spent for goods and services in the nation last year was a construction dollar, and that this 13% of the gross national product created directly and indirectly about 15% of total gainful employment.

Official estimates have been made that the volume of new construction during 1954 will be about \$34 billion. If the government forecasts are correct this will be the second largest volume of construction in history. There are, however, potentials which could make the 1954 volume greater than last year.

The reduction in defense expenditures has brought about a period of business readjustment in which competition in most lines has become increasingly keen. It likewise has provided the opportunity for increased peacetime activity.

Economic Preparedness. The plans of the Administration for economic preparedness were outlined in various messages to Congress by the President in January, in which he stated:

"This Administration is determined to keep our economy strong and keep it growing. At this moment, we are in a transition from a wartime to a peacetime economy. I am confident that we can complete this transition without serious interruption in our economic growth. But we shall not leave this vital matter to chance. Economic preparedness is fully as important to the nation as military preparedness."

Public Works Policy. One of the "arsenal of weapons" for economic preparedness is the timing of public works construction. The President's budget message stated:

"The recommendations for public works in this budget

are based on the policy that as long as national income and employment remain high, public works expenditures should be held to a minimum, consistent with sound provisions for meeting the responsibilities of the federal government. This is in line with the Administration's policy of encouraging non-federal interests to formulate plans and undertake developments on their own initiative and responsibility. . .

"Timing of public works expenditures is one of the means by which government activities may be used to offset a decline in private construction. To be effective as an anticyclical measure, however, needed public works measures must be planned well in advance so as to be available for undertaking when economic conditions dictate. This budget provides funds for the advance planning of additional federal projects. It also provides, under proposed legislation, \$10 million to institute a program of loans to state and local governments for the advance planning of their public works."

Accelerated Depreciation. One of the Administration's tax proposals is of particular interest to the construction industry. It would permit the accelerated depreciation of structures, equipment and machinery. This is a measure advocated by the A.G.C. since 1944.

Another favorable factor for construction is the fact that in recent elections voters have approved a large number of state and local public works projects.

Construction by Contract. A continuing project of the association nationally and locally is to promote legitimate markets for general contractors.

A growing market for contractors' services has been developing in maintenance by contract, particularly in the highway and municipal fields. Both the association and the building trades unions have been studying the agreements by which production unions have been seeking to take over new construction and maintenance operations in their particular industries.

Contracts and Specifications

Continued progress has been made in the association's basic program of working for improvements for fair and equitable contract documents, administrative procedures, and specifications of public and private awarding agencies.

Government Contracts. In carrying out a resolution adopted by the Governing and Advisory Board last September opposing "the award of any government construction contract at an adjusted price where such adjustment in price has been made because of a plea of error on the part of the bidder," A.G.C. representatives conferred early in February with the Comptroller General.

The association representatives were supported by

letters from government awarding agencies. The conference explored the subject thoroughly, and the A.G.C. representatives were assured of a reply from the Comptroller as soon as possible.

Work by the General Services Administration, other government agencies, and the A.G.C. in the development of a more equitable form of standard government construction contract form has been delayed pending outcome of legislation before Congress relating to the disputes or finality clause.

Last March the GSA issued a revised Form 23 for standard government construction contracts which was to become mandatory for use by government agencies on June 19. The A.G.C. protested the new form as inequitable, and its mandatory use was postponed by GSA until December 1.

A.G.C. proposals have been the subject of conferences with the GSA and other government departments. Because the A.G.C. has been given assurance by Members of Congress that legislation will be enacted relating to the disputes clause, the work with GSA has been delayed pending action by Congress. A.G.C. actions are described in the legislative section.

While the contract renegotiation act expired December 31, action is expected by Congress to restore the legislation. In December 1952 the Renegotiation Board issued Staff Bulletin No. 12, *Guide for Renegotiation of Construction and Architect-Engineer Contracts*, following A.G.C. recommendations. Use of the guide has appeared satisfactory to the government and the industry.

Government Specifications. Last June the A.G.C. Task Unit on Corps of Engineer Specifications met with representatives of the Corps to discuss a 16-point agenda concerning Corps specifications. The A.G.C. was subsequently informed that most of its recommendations had been adopted.

In July a special A.G.C. committee met with the Corps' Airfield Branch to discuss specifications for flexible pavements for runways. The Corps later replied that the majority of A.G.C. recommendations had been put into effect.

In September the Task Unit on Bureau of Reclamation Specifications met in Denver with representatives of the Bureau, and made recommendations which were adopted.

In January, at the request of the Rural Electrification Administration, the A.G.C. established a Task Unit to confer on specifications with that agency.

Private Contract Documents. Last September the American Society of Civil Engineers and A.G.C. issued a new *Suggested Form of Contract for Use in Connection with Engineering Construction Projects*. This document takes the place of the former *Standard Contract for Engineering Construction*, originally published in 1925.

At the request of the American Institute of Architects

the A.G.C. has reviewed and officially endorsed the latest revisions to the A.I.A. Cost Plus a Fee Form of Contract.

Last October the two groups published the latest officially approved revisions to the document, *A Suggested Guide to Bidding Procedure*.

The Task Unit for Municipal Specifications is working with the American Public Works Association on revisions to the A.P.W.A. *Sidewalk and Curb Specifications* and *Subgrade and Foundation Specifications*.

The Joint Cooperative Committee of A.P.W.A. and A.G.C. will recommend to this convention for approval a standard form of contract for municipal engineering projects.

Local Committees. Space does not permit here a listing of the actions which A.G.C. chapters have been taking with architects, engineers, public officials and others in their respective communities to improve contract documents and procedures, but the work has been beneficial.

Equipment and Repair Parts

Close contact has been maintained by A.G.C. with the national associations of equipment manufacturers and distributors so that manufacturers and distributors could have information on the needs for new machinery and repair parts, contractors could have information on their availability, and so that joint action could be taken on necessary matters.

Joint Cooperative Committees which A.G.C. maintains both with the Construction Industry Manufacturers Association and the Associated Equipment Distributors held separate meetings last September in connection with the A.G.C. Board Meeting, and met again prior to this convention.

Generally, new machinery and repair parts have been available promptly with the exception of certain special items. Advertisements by manufacturers indicate greater competition in this field.

Product Improvement. Continued improvement of the concrete mixers and pumps used by the construction industry has been made through the standardization programs of the Mixer Manufacturers' Bureau, which has completed its 30th year, and the Contractors' Pump Bureau, which has completed its 15th year. Both groups are affiliated with the A.G.C. The pump and mixer standards have been referred to A.G.C. for approval as improvements are made.

Labor Relations

As a result of the President's proposals, Congress is now considering possible changes in the Labor-Management Relations Act which would affect all businesses including construction. So far, there appears to be no real common ground on which labor and management

can agree and the likelihood of constructive amendments during this session diminishes as time goes on.

During the past two decades the federal government exerted a strong influence on behalf of labor unions. While there were emergency controls, the government was the dominant force in the relationships between workmen and employers.

The new Administration is seeking impartiality and objectivity in establishing the broad principles by which it should govern employer-employee relationships.

While a new national policy slowly emerges, there is a great opportunity, and a great need, for statesmanship and constructive leadership by the government, unions and management.

Providing assistance to members and chapters in the development of sound labor relations programs and in meeting their day-to-day labor problems continues to be an important association activity.

Collective Bargaining. The association at the last annual convention adopted a resolution recommending that "members and chapters accept their responsibilities as representatives of the construction industry to cooperate with the Administration and with the people of the United States in their efforts to stabilize the national economy by avoiding unwarranted increases in wages or fringe benefits which are detrimental to the national welfare."

In September the Governing and Advisory Boards adopted a resolution recommending that chapters and members "for the best interests of the construction industry and the public resist any further increase in wages or fringe benefits."

Unreasonable wage demands were resisted vigorously in many parts of the country by employers. In some cases, this resistance was at the price of prolonged and costly strikes.

The efforts of general contractors were made more difficult in some instances by certain employers in production industries volunteering further wage and welfare increases at a time when construction contractors were resisting unreasonable wage demands. In some instances the unions split employer bargaining groups in efforts to secure further wage increases and even threw over traditional bargaining relationships to gain wage increases from newcomers and transient employers in a collective bargaining area.

So far this year no definite national pattern has emerged as to union intentions to seek another annual increase, although such pressure already has been exerted in a number of localities. Up to now the unions have generally followed a "wait and see" policy before making a decision on this subject.

If the construction industry is to attain its potential

volume of work this year, public and private awarding agencies and the public will need to be convinced that the cost of construction is in line with that for other services and commodities, and not have the feeling that wage increases have made costs exorbitant. The unions can do much to help contractors reduce costs and thus protect and increase the construction market.

Welfare Plans. The intermittent nature of construction employment, the shift of workers from community to community and the serious legal problems inherent in all welfare plans, particularly those involving huge sums of money, raise serious doubts as to the possibility of ever establishing safe and satisfactory union-employer health and welfare plans in the construction industry. It is believed that when the Congressional investigations on this subject are completed, the proponents of these plans will see the dangers involved and the uncertain benefits resulting to the individual employee.

A major activity of the year has been to furnish chapters and members with all possible information and assistance in their collective bargaining negotiations.

Labor Legislation. Early in January the President sent to Congress his 14-point message recommending amendments to the Labor-Management Relations Act of 1947 (Taft-Hartley). He termed the act "sound legislation" but added that experience "indicates that changes can be made to reinforce its basic objectives."

The same day, Chairman H. Alexander Smith (R., N. J.) of the Senate Labor and Public Welfare Committee introduced S. 2650, "in order that what might be called the Administration bill may be immediately before our committee." Public hearings were started by the committee late in the month.

Some of the recommendations directly affecting construction had previously been contained in S. 656 which the late Senator Taft had introduced a year ago. This would permit pre-hire agreements, but authorize union shop agreements with the waiting time for union membership cut from 30 to 7 days. Other of the President's recommendations would ease the ban on secondary boycotts in construction. On this subject, the language of the Administration Bill (S. 2650) contains technical and restrictive language which is less broad in scope than the President's recommendations.

The proposal which has aroused most controversy is whether or not there should be secret strike votes taken under government auspices, and whether they should be before or after the strike starts. Congressional action on any of the proposals cannot yet be forecast.

Government Departments. In accord with a motion adopted by the Governing and Advisory Boards, A. G. C. representatives called upon Secretary of Labor James P.

Mitchell after his appointment to express the association's objections to the manner in which the Davis-Bacon Act had been administered in the past, and to request that steps be taken for an impartial administration in the future.

By the year's end there was definite evidence of more fairness and objectivity on the part of Labor Department officials handling the predetermination of wage rates for federal construction projects. Improvements in the administration of the Labor Department's enforcement program were less clear. The association will continue its service of sending chapters information about predeterminations in their states, and assisting them in filing appropriate protests and other information.

There is the likelihood that legislation providing for the judicial review of predeterminations and enforcement actions will be considered by Congress at this session.

Secretary Mitchell, who had contact with the construction industry during World War II, has given evidence of seeking fairness and impartiality in his administration of the department.

The National Labor Relations Board previously had been accused of seeking to circumvent provisions of the Taft-Hartley Act through administrative action. After President Eisenhower appointed two new members last year, there was a notable shift to a realistic administration of the act in accord with Congressional intent in decisions.

Jurisdictional Board. The National Joint Board for the Settlement of Jurisdictional Disputes has operated successfully during the past year. Certain changes were made early in 1953 to increase membership on the board by the use of alternates for each of the regular members. There now are representatives from eight of the unions, and employers have four regular members and two alternates. There were some changes in procedures which, however, did not materially affect the contractors' responsibilities under the Joint Board Plan.

The board has been helpful in preventing disputes and reducing the stoppages of work caused by jurisdictional disputes, and is devoting its efforts to developing more prompt methods to return men to work after a strike does occur.

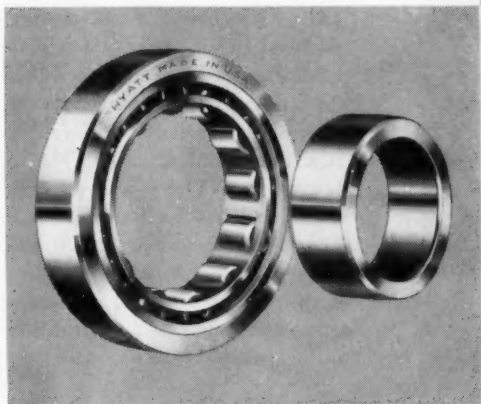
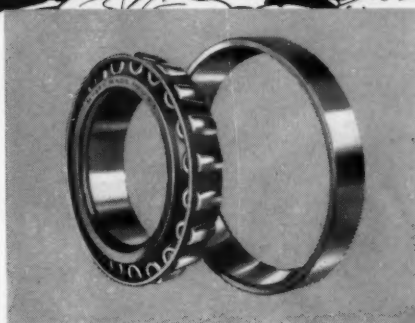
The policy of the association has been to continue representation on the board and to continue to seek more effective means of avoiding work stoppages caused by jurisdictional disputes.

Federal-State Relations. Problems are arising for which there are no immediate solutions relating to the applicability in various cases of federal or state labor laws.

The President's message on Taft-Hartley Act amendments recognized the problems inherent in the federal-



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state relationship and asked Congress to make a special study of it. The NLRB has shown a reluctance to take jurisdiction over cases where the effect on interstate commerce is small. The United States Supreme Court, in recent cases, has cast doubt on the right of states to invoke their own labor laws for types of cases for which Congress has enacted legislation, even though the NLRB or other federal agency does not see fit to assert jurisdiction.

Problems in labor negotiations, because of the differing needs of the transient employer and the local bargaining group, continue as a major obstacle to united employer bargaining. Every effort is being made to find a satisfactory solution. This problem deserves more than usual forbearance and tolerant reasoning in all cases.

Accident Prevention

The effectiveness of the association's program to assist chapters and members in their safety programs was further expanded during the year.

Members have been encouraged to study the facts as to their own safety programs by using forms provided by the national office for determining their frequency and severity rates. These are tabulated and all cooperating members are able to compare their records with others. In 1953 twelve times as many members were doing this as in 1943, and the number in 1953 increased 54% over 1952.

As a measure of the effectiveness of the A.G.C. program, the record shows that for all members cooperating the severity rate decreased 10% from 1952 to 1953, and the frequency rate decreased 8%. The record of all members cooperating in 1953 was better than in 1952, and better than the record for the industry as a whole as measured by reports of the U. S. Department of Labor.

At this convention 18 first place merit awards will be presented to members with outstanding safety records. Awards for 36 second and third place winners, and 309 Certificates of Commendation for companies with no lost-time accidents in 1953, will be presented locally.

Safety Teamwork. The A.G.C. Accident Prevention Committee has developed a comprehensive program of national cooperation. Working with the committee are safety engineers, representatives of the associations of stock and mutual casualty insurance carriers, and the A.G.C. Secretaries' and Managers' Council Liaison Committee. These groups held two full days of meetings prior to this convention reviewing actions of subcommittees involving a wide range of safety activities.

In line with A.G.C. policy of emphasizing cooperation with other elements in the construction field, an agreement has been consummated between the association

and the National Safety Council whereby the council, acting through the A.G.C. office, will provide certain materials to assist chapters and members in their safety programs. Monthly packets, paid for by the national association, are going to each A.G.C. chapter "conducting an accident prevention program." This service will be extended to other chapters as they take steps to activate a program among their members.

Chapter Programs. An increasing number of chapters have been developing safety programs which are providing effective assistance for their members. A recent development is the rapid growth of safety schools sponsored by chapters for contractors and their supervisory personnel, or schools whose curricula include safety.

About half the members of the Executive Committee, Construction Section, National Safety Council, are connected with A.G.C. firms, chapters, or the national office. The association is represented on committees of the President's Conference on Occupational Safety, and many chapters are active in state safety conferences.

Chapters and members report that their increasingly effective safety work is adding to their prestige and standing as leaders in the construction industry. However, more chapters and members should increase their safety activities and make them known to demonstrate more positively that mandatory legislation and government inspection cannot accomplish as much as voluntary industry action.

Building Construction

There are the potentials for a continued high volume of building construction in 1954. There will be some shifts in types of construction coming on the market, and all communities will not share equally in the amount of work, but indications point to a year only slightly below the 1953 record if it is not again reached in 1954.

The public needs for the construction of schools and hospitals particularly were highlighted by the President in messages to Congress in January. He estimated the needs for school construction at \$6.75 billion annually for the next decade, or about three times the present rate of construction; and the needs for construction of medical facilities at \$1.5 billion annually for the same period, or more than double the present rate.

He recommended extension of the federal Hospital Survey and Construction Act to aid states in planning and construction of needed medical facilities. He recommended that each state hold a meeting on school needs, so that a later national meeting could determine more accurately the national needs.

The President's housing message outlined his recommendations for a national housing program.

During the year the Building Contractors' Division has taken action on a wide range of problems particularly affecting building contractors, has kept members and chapters informed of significant developments, and has assisted members and chapters in particular problems.

The division will meet in connection with this convention for a thorough discussion of matters of direct interest to building contractors.

Subcontractor Relations. A major project of the division during the past year has been to oppose enactment by Congress of the proposed Federal Construction Contract Act (S. 848 and H.R. 1825) which would regulate the bidding and award of subcontracts on federal public works projects.

While this would affect all federal public works construction, this subject is of greatest concern to building contractors. The association's actions are reported in the section on National Legislation.

Regardless of the outcome of the legislation, there still is need for the association and general contractors to take positive action to improve the relationships between general and subcontractors. Explorations for means of bringing about better relationships and fair and equitable bidding and awarding procedures are under way.

Compensation Insurance. As requested by the division at the 34th annual convention, a comprehensive study has been undertaken of the administration of workmen's compensation laws and of complaints that there have been excessive increases in compensation insurance rates.

Three principal reasons found for increasing compensation insurance rates are: state courts and compensation boards have been awarding abnormally large payments; states have approved increases in disability benefits; and there has been too little attention to rehabilitation of injured workers.

The President has recommended legislation which the Congress is considering to improve the rehabilitation program. The A.G.C. study of the problem indicates the need for continued study by the national association and the chapters.

Cooperative Work. Much of the division's work is carried out in cooperation with other associations or societies in the industry. Last October, following approval by both the American Institute of Architects and the A.G.C., the jointly-developed document, *A Suggested Guide to Bidding Procedure*, was republished incorporating the latest revisions.

The national joint cooperative committee of the two groups has reviewed the latest preliminary draft of a

book, *Building Better From Modular Drawings*, which is being prepared with cooperation of the Housing and Home Finance Agency, and has recommended wide distribution to builders and architects when published.

Insurance provisions of the A.I.A. standard contract forms have been studied, and final recommendations for improvements will be made in the near future.

So far at least 44 A.G.C. chapters have established local joint committees with A.I.A. chapters.

The national joint cooperative committee which the association maintains with the Producers' Council has developed programs of education and instruction on uses of new building materials which can be used by A.G.C. members and chapters. Mutual problems concerning materials manufactured in accord with the modular coordination method also have been discussed.

Research. The association has continued its active support of the Building Research Advisory Board. Last year the A.G.C. participated in conferences on the use of porcelain enamel in building construction and on building documentation. The association is represented on a committee which earlier this year began studying with the Weather Bureau the needs of the industry for information on climatic conditions.

Apprenticeship. Statistics indicate that while there has been an increase in the number of apprentices completing training programs the industry will require greater numbers in the future. The association's Apprenticeship Committee has given study to the means of interesting more young men in the industry.

National joint apprenticeship committees which the association maintains with the international unions have approved revised national standards for cement masonry, which have been published, and revised national standards for carpentry apprenticeship, which are being printed. Work has been started on revised standards for bricklaying apprenticeship. Interest has been shown by chapters in iron workers apprenticeship activities.

During the year a number of chapters have initiated new training programs.

Highway Construction

Positive steps are now being taken by governmental agencies which will increase the volume of highway construction in 1954 and future years.

A growing public understanding of the tremendous needs for highway construction was highlighted by the President who reported to Congress in January that "the total annual expenditure required to provide an adequate road system within a decade is apparently over \$8 billion, which compares with a current outlay of about \$5 billion."

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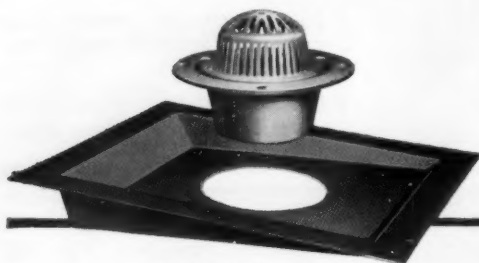


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MAHON

During the past year the Highway Contractors' Division has taken action on a wide range of matters directly affecting highway contractors, has kept members and chapters informed of significant developments, and has provided assistance to members and chapters on particular problems.

The division will hold a meeting during the convention for a thorough discussion of matters of interest to highway contractors.

Highway Financing. The growing public understanding of highway needs has brought a greater understanding of the problems of financing the necessary increased construction program.

The most careful surveys which have been made indicate that an investment of more than \$60 billion is needed to bring the highway system up to the standards necessitated by safety requirements and the demands of increasing traffic. Of this amount, nearly \$35 billion is needed on the federal aid network of more than 673,000 miles, two-thirds of which needs improvement.

Following the President's recommendations, House Roads Subcommittee Chairman J. Harry McGregor (R., Ohio) early in February introduced the Administration bill authorizing total federal highway expenditures of \$887 million annually for the two fiscal years starting July 1, 1955 and 1956. The biggest increase over current authorizations, which are for \$734 million annually, is for authorizations on the interstate network. The increase is from \$25 million to \$200 million annually. Federal-aid authorizations for state matching and expenditure would increase to \$800 million in each of the two fiscal years from the present \$575 million annually under this bill.

Congressman McGregor forecast prompt House action on the bill which would increase total federal highway expenditures almost to the \$910 million collected annually from the 2¢ federal gasoline tax. The President, and others, have recommended continuation of the federal gasoline tax at the same rate after April 1 when by present law it is scheduled to drop to 1½¢.

The highway bill is the result of extended public hearings by the House subcommittee last year, the recommendations of the American Association of State Highway Officials and many private organizations, and of the Administration.

During the public hearings last year A.G.C. representatives supported the A.A.S.H.O. recommendations, urged that there be no diversion of revenues from highway uses to other purposes by any unit of government, that federal-aid construction programs be administered through present channels, that federal-aid funds continue to be available for the purchase of right of way, and that legislation permit long range planning.

General support of the need for increased highway financing and construction also was given during the winter by a conference held by the Chamber of Commerce of the United States, and in a study on highway financing, with both of which A.G.C. representatives were prominently identified.

With respect to increased financing and construction the A.G.C. has taken appropriate action to carry out the resolution adopted at the last annual convention.

Maintenance by Contract. Special emphasis has been given by the national association, and many of the chapters, to the encouragement of highway maintenance by contract. Staffs of the division and *THE CONSTRUCTOR* have collaborated on a series of articles describing the programs of various states, which have attracted widespread interest.

A special A.A.S.H.O. committee has completed a study which shows that 34 state highway departments undertake some form of maintenance by contract. The A.G.C. will continue to encourage maintenance, which amounts to approximately 25% of a department's expenditures, by contract.

Highway Officials. Maintaining close contact with federal and state highway officials by the national office and chapters continues to be an important part of the association's program. Since the last convention five meetings of highway officials and contractors have been held as part of the work of the joint cooperative committee of A.A.S.H.O. and A.G.C. These have been held in connection with national meetings of the organizations, or regional meetings of highway officials. Another meeting will be held at this convention, and two more within the next few days.

Subjects considered have included improvement of specifications and contract documents, methods to reduce construction costs, financing, public relations, adequate salaries for officials and engineers and overcoming the shortage of engineers, maintenance by contract, and others. Benefits to contractors, highway departments and the public have resulted from these national, regional and state meetings.

Rural Electrification. Officials of the Rural Electrification Administration are giving greater stress to the contract method of construction to the borrowers of REA funds who award construction contracts.

At the agency's request, the A.G.C. has appointed a Task Unit to confer with the agency. The first meeting was held in February. Discussions included construction by contract; contract forms, specifications, and administrative procedures; inspections; and plans for future construction programs.

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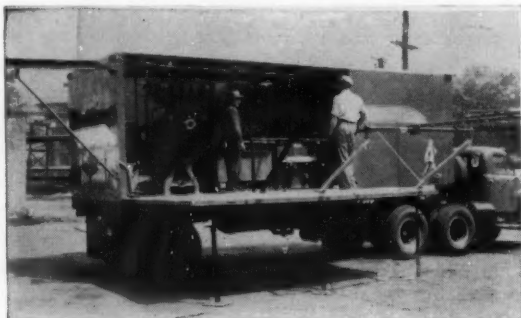
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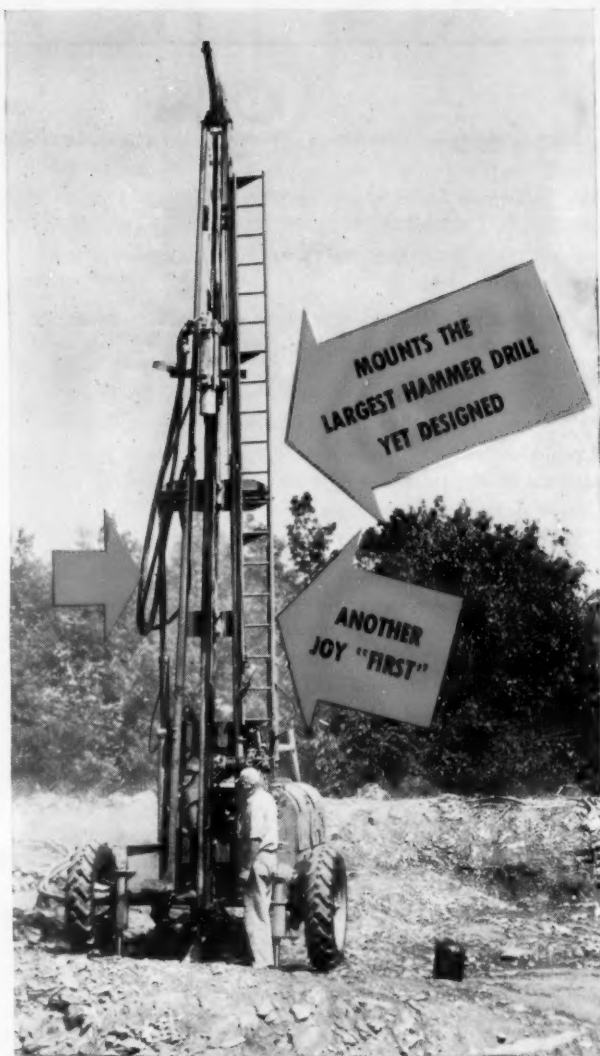
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Airports. Contact continues with the National Association of State Aviation Officials through the joint cooperative committee, which will hold a meeting at this convention. With federal-aid funds for airport construction almost eliminated, airport officials have become concerned about needs of securing adequate financing from other sources for needed construction. The committee also considers contract documents, specifications, and methods leading to more economical construction.

Heavy-Railroad Construction

Indications are that the volume of heavy and railroad construction will continue at a high level in 1954 and will be only slightly less if it does not actually reach the \$11.5 billion total of 1953.

The President in messages to Congress in January highlighted the needs for federal, state and local water and sewerage facilities by reporting that to eliminate the backlog and provide for the current growth in population annual expenditures of \$1.8 billion will be needed for the next five years, or three times the present rate of construction.

The Heavy Construction and Railroad Contractors' Division during the year has taken action on many matters of direct interest to heavy contractors, has kept chapters and members informed of significant developments, and has assisted members and chapters on particular problems.

The division will meet at this convention for a full discussion of matters of direct interest.

Government Contracts. One of the association's activities of particular interest to heavy contractors has been to seek legislation which will assure the right of judicial review of disputes arising under government contracts, as embodied in the bills S. 24 and H.R. 1825 pending before Congress. Association actions in this regard are described more completely in the National Legislation section.

Work directed toward revising the government standard construction contract form has been carried out by the association with the General Services Administration and other government departments. Final action on A.G.C. recommendations has been delayed pending outcome of Congressional action on S. 24.

Bidding Errors. In line with a resolution adopted by the Governing and Advisory Boards last fall upon recommendation of this division, association representatives in February met with the United States Comptroller General to present the resolution and supporting information

opposing the award of government construction contracts at an adjusted price upon plea of error by the bidder. A reply giving the Comptroller General's decision has been promised as promptly as possible.

Task Units. The association's Task Unit on Bureau of Reclamation Specifications met with Bureau representatives in Denver last September and held discussions of mutual benefit to both parties. The unit is also meeting at this convention.

Last June another Task Unit met with the Corps of Engineers for discussions, and subsequently submitted recommendations for specification improvements which have been adopted. This unit is also meeting at this convention. A special committee met with the Corps' Airfields Branch in July, and made a number of recommendations for flexible runway pavements which have been adopted.

Soil Conservation. Additional markets for contractors are being developed in soil conservation work. The national office has suggested changes in the specifications used by the Soil Conservation Service, which has asked assistance in interesting contractors in this type of work.

The President in messages to Congress in January recommended legislation "to strengthen agricultural conservation and up-stream flood prevention work, and to achieve a better balance with major flood control structures in the down-stream areas." He also recommended that farmers be permitted to take tax deductions up to 25% of their incomes for soil conservation expenditures.

Municipal Construction. The American Public Works Association has predicted an 8% to 10% increase in municipal construction in 1954 above the \$3.9 billion of 1953, and reports that a \$13 billion backlog of planned construction indicates work at a continued high level in the future.

The joint cooperative committee of A.P.W.A. and A.G.C. has been active, and has held another meeting before this convention. It will recommend for approval a standard public works engineering contract form. The A.G.C. Municipal Specifications Task Unit has studied and made recommendations for improvement of various municipal construction specifications.

Although contractors performing municipal construction have for some time held special meetings at the chapter level, they are meeting for the first time nationally as a separate group at this convention, to discuss matters of mutual interest and to outline a 1954 program of activities. Expressions of this group will be forwarded to the Heavy Division for appropriate action.

National Legislation

The Second Session of the 83rd Congress, which will be freshest in the minds of voters at election time, has before it matters which are vital to all business and industry, and to construction.

The program of the Eisenhower Administration began to unfold in detail in the series of major messages which the President sent to Congress in January. Many of the President's proposals are aimed at developing "a climate assuring steady economic growth."

Legislation by Congress will be required to put most of the proposals into action. The construction industry is directly, and indirectly, affected by a great number of the President's recommendations as they relate to the advance planning and construction of all types of federal, state and local public works; taxation as it stimulates private investment; labor-management relations; and others.

Legislative developments were so rapid when this report was being prepared that it was not feasible to try to list all that related to construction. It will continue to be a major activity of the association to keep its members informed promptly of significant developments, and, when appropriate, to advise committees and members of Congress of the effect which various proposals will have on the industry.

Judicial Review. Legislation which will assure the right of judicial review of disputes arising under federal contracts is half way through Congress. The bill, S. 24, was passed by the Senate last June, and is now before the House Judiciary Committee with its identical companion, H.R. 1839.

In January Past President Winkelman appeared before the House committee to testify in support of these bills. The A.G.C. has been assured by members of the committee that favorable action will be taken on the legislation in the near future.

Immediately following the Mid-Year Board Meeting last September, the association designated certain of its members to encourage all A.G.C. members to make contact with their representatives in Congress to explain the need for this legislation to offset the effects of the United States Supreme Court decision in the *Wunderlich* case.

In October President Street issued a statement, *The Judicial Review of Contract Disputes is a Fundamental Right of American Justice*, which explained the proposed legislation and the reasons for its passage. Copies were printed and widely distributed.

Since the time of the Supreme Court decision, the A.G.C. has taken the lead in advocating legislation for the principles set forth in S. 24 and H.R. 1839.

There is the possibility that the House may pass the bill in a slightly amended form. In that case the bill will have to be returned to the Senate for further action. If the House passes the bill as it has been passed by the Senate, and supported by Mr. Winkelman's testimony, the legislation then can go directly to the White House for the signature which will enact it into law.

Subcontractor Bill. The strongest kind of political pressure has been exerted on members of Congress by mechanical specialty contractor organizations for the passage of the proposed Federal Construction Contract Act, S. 848 and H.R. 1825. The bills have been approved by both the Senate and House Judiciary Committees.

The bills have been vigorously opposed by A.G.C. members for the reasons that their intricacies would work a severe hardship on general contractors, would tend to increase the cost of federal public works construction, and could provide the means for reducing competition for subcontracts.

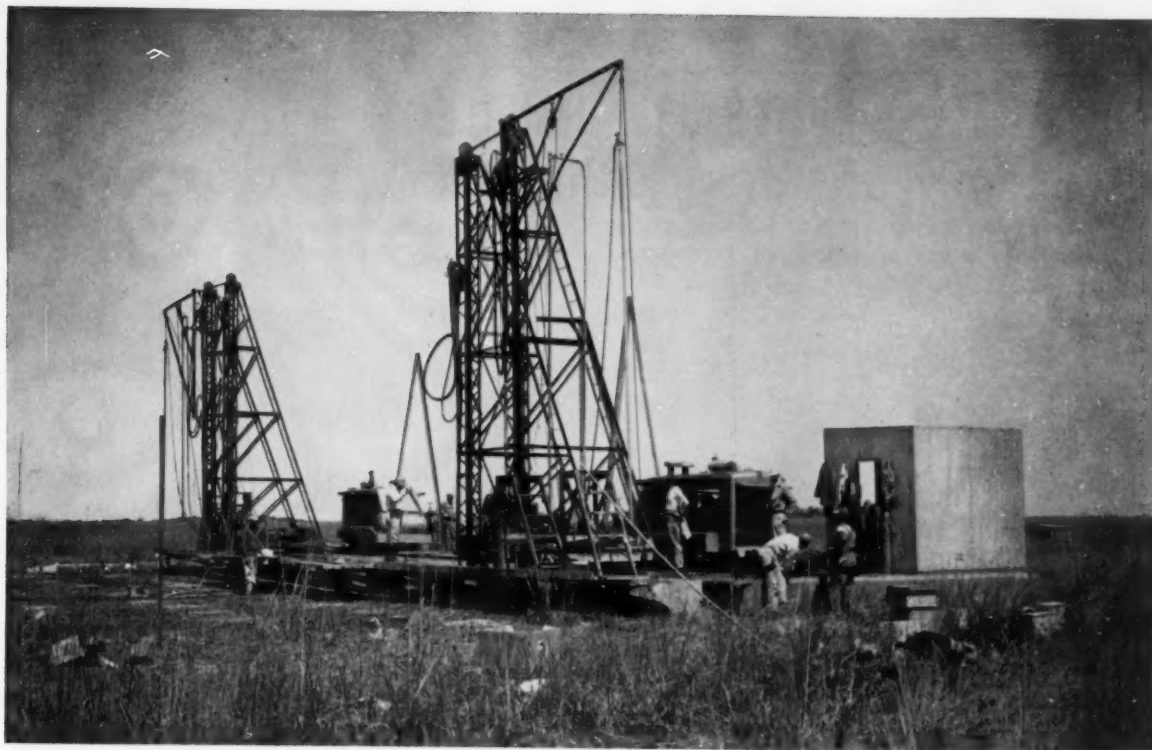
Following continued study of the bills at the Mid-Year Board Meeting last September, reported by the chairmen of the A.G.C. Subcontractor Relationships and Legislative Committees, a program was organized to encourage association members to make personal contacts with their representatives in Congress to explain the harmful effects of the legislation.

In September the association printed and distributed a document, *The Proposed Federal Contract Act of 1953 (S. 848 and H.R. 1825) is Detrimental to the Public Interest*, which set forth the reasons why the legislation should not be enacted.

In January, shortly after Congress reconvened, President Street sent a letter to each member of Congress, on behalf of their constituents who are general contractors, tersely setting forth reasons for not passing the legislation and explaining that the subject of subcontractor relationships is one which can be solved more effectively by leaders within the construction industry.

Accelerated Depreciation. One of the important tax proposals made to Congress by the President was to permit the accelerated depreciation of structures, equipment and machinery because it "provides a basis for economic growth, increased production, and improved standards of living."

This proposal is of particular interest to the A.G.C. because on October 4, 1944 the Executive Committee endorsed the proposal of President Muirhead that study be given to accelerated depreciation as a means of stimulating investment in construction.



LAND-GOING DRILL BOAT

Helps Blast 16-Mile Canal through Florida's Everglades

*Amphibious barge
readily towed through water
or overland, carries four
I-R famous X71WD Drills
powered by two I-R
Gyro-Flo Compressors*

Deep in the heart of Florida's Everglades, the Gahagan Construction Corporation of New York is engaged in drilling and blasting 2½ million cubic yards of coral rock. The rock lies in 16 miles of proposed drainage canals across the peat

and semi-fluid waste land of the Everglades.

The contract covers part of a huge flood control and water conservation project that will consist of a series of levees and borrow pit drainage canals dividing the district into vast protected areas. An artificial lake 1500 square miles in area will be created which will be used to store excess flood waters until needed for irrigation and restoration of water levels during dry periods.

To drill 11 of the 16 miles of 90 foot canal under existing conditions required radical innovations in rock drilling equipment. A special all aluminum amphibious drill barge that can be towed through water

and pulled overland was designed by Gahagan Construction Corporation to carry the compressors and drilling towers. The work is under the control of Jacksonville, Fla. District of the Corps of Engineers, U. S. Army.

Four Ingersoll-Rand X71-WD Drills were selected to do the drilling because of their high drilling speed and hole cleaning ability especially on deep holes. Two Ingersoll-Rand Gyro-Flo 600 cfm rotary compressors were chosen because of their light weight and ability to deliver high pressure air at full load.

Ingersoll-Rand makes a full line of contracting equipment. Ask about the I-R Contractors Combination.

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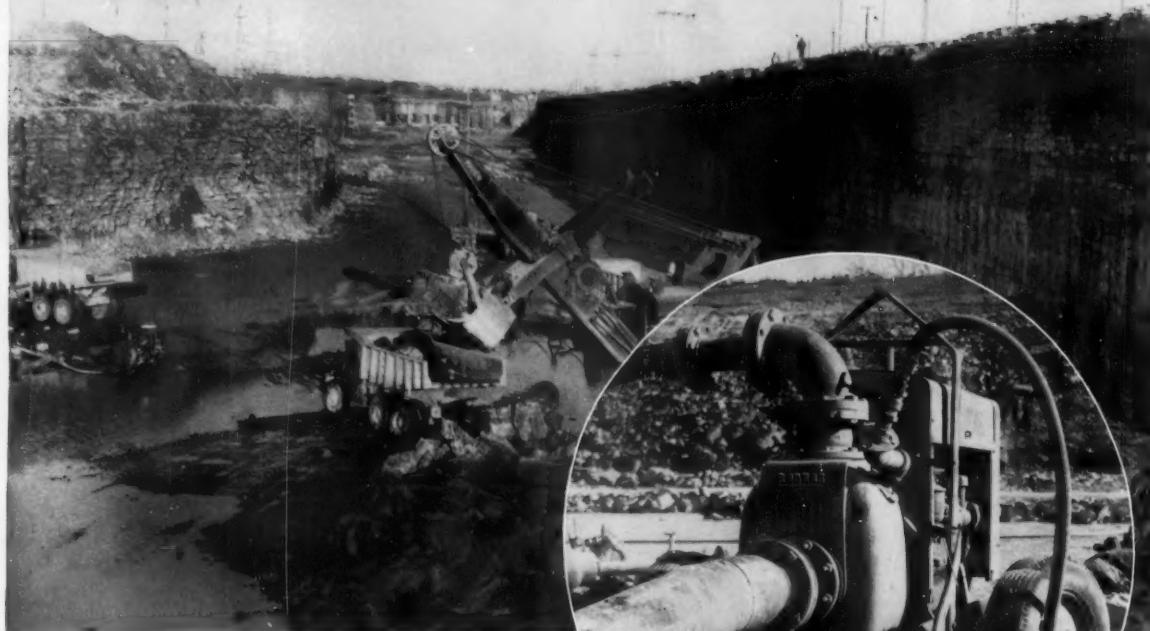
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COMPRESSORS • ROCK DRILLS • AIR TOOLS • TURBO BLOWERS • CONDENSERS • CENTRIFUGAL PUMPS • DIESEL AND GAS ENGINES
THE CONSTRUCTOR, MARCH 1954

101

BARNES PUMPS HELP HANDLE SEEPAGE ON GIANT CANADIAN HYDRO PROJECT!



5,500 men working on day and night shifts—two 5½-mile-long supply tunnels, 45-ft. in finished diameter, extending under a densely populated area . . . a 2¼-mile canal designed to carry 40,000 c.f.s. . . . a new power house with installed capacity of 1,200,000 h.p. . . . an expenditure of \$300,000,000—these are highlights of the gigantic project now under way at Niagara Falls which is being rushed to completion by The Hydro-Electric Power Commission of Ontario to meet the growing demands for power in a booming industrial area.

When completed in 1956, this generating station located in the side wall of the Niagara gorge and six miles below the Falls, will stand as another sound engineering achievement attesting to the progressiveness of The Hydro-Electric Power Commission of Ontario and the manner in which it meets its obligations as a public servant.

The Barnes Manufacturing Co. is honored to have its pumps selected for the important work of helping control surface and seepage water in the construction of this project.

Barnes 90M Self-Priming Centrifugal Pumps Operate 24 Hours a Day in Helping to Control Surface and Seepage Water in Canal Section of Vast Hydro-Electric Power Commission's Sir Adam Beck-Niagara Generating Station No. 2.

BARNES MANUFACTURING CO.

MANSFIELD, OHIO

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★ ★ ★ BUY THE BEST . . . BUY BARNES ★ ★ ★ ★

Studies which led to the President's 25 tax proposals, and which will lead to further recommendations for improving the federal tax structure, were carried on during the past year by the Treasury Department and the Congressional committees handling tax legislation. The House Ways and Means Committee in January started executive sessions on drafting a tax bill to be ready for consideration by the House early in March.

Public Works. In his Budget and other messages to Congress the President has made several important recommendations with respect to public works construction of federal, state and local governments. He has stated the philosophy that the timing of public works expenditures can be one of the means by which government activities may be used to offset a decline in private construction, with the provision that the timing should be consistent with sound provisions for the government to meet its responsibilities for the construction of projects which are needed immediately.

When the various proposals are before Congressional committees for action, the association will be prepared to testify in support of sound proposals and explain their effects on the industry.

Highway Bill. On February 9 Chairman McGregor of the House Roads Subcommittee introduced H.R. 7818, the Administration bill authorizing total federal highway expenditures of \$887 million annually for the fiscal years starting July 1, 1955 and 1956.

The bill comes close to recommendations of the American Association of State Highway Officials, which the A.G.C. supported in its testimony before the subcommittee last year. Vice-president-elect Koss testified before the House subcommittee again in February, and supported the Administration bill.

TVA. In February association representatives testified before a House appropriations subcommittee pointing out the disruptive effects on surrounding areas of the wage rates paid by the Tennessee Valley Authority, and recommended that the authority's construction be executed by contract. The testimony was in line with resolutions previously adopted by the association.

Contract Renegotiation. The President has recommended that legislation be enacted to extend the contract renegotiation law which expired on December 31. So far there have been objections to its consideration both times that a bill previously passed by the House has come before the Senate on the Consent Calendar.

The Legislative Committee met before the convention for a thorough review of the association's program.

Government Relations

A continuing function of the association is to maintain contacts with the governmental departments and agencies whose work directly affects general contractors and, when necessary, to present information on construction and the operations of contractors.

Because of its experience and the information which it can furnish, the association has been able to render valuable assistance to government executives responsible for policy decisions.

The association's policy has been consistent to present accurate and reliable information to the government and to make recommendations which are of benefit to all contractors and the public. It has earned and enjoys the confidence and respect of government departments.

Last December the President, Managing Director, and Executive Director attended a conference of construction leaders with Secretary Weeks and other Commerce Department officials to discuss operations of the Construction and Building Materials Division of the Business and Defense Services Administration. The aim of the government is to make this agency as useful as possible to the industry.

Task Units. Task units of the association's Contract Forms and Specifications Committee with the Corps of Engineers, the Bureau of Yards and Docks, and the Bureau of Reclamation have served to bring about even better relationships and understanding between the association, its members, and the agencies, and many A.G.C. recommendations have been adopted which are of benefit to both the industry and the government.

Various association representatives are members of numerous advisory committees to government agencies, and have performed valuable work in advising the departments.

The association recently has been asked to submit information to the Commission on Intergovernmental Operations, which was established by act of Congress to make a broad and comprehensive study of all aspects of the proper role of the federal government in relation to the states and their political subdivisions.

Part of the commission's duties is to inquire into the operations and need for continuation of all of the federal aid programs, including the highway, airport, hospital, school and other construction programs.

Association work with the General Services Administration and other departments in making recommendations for a fair and equitable standard construction contract form has been delayed pending action by Congress on legislation which would establish the nature of the disputes clause.

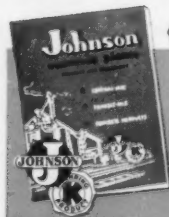
Ideas for storing and batching aggregates and cement:



254 to 1321-bbl. bulk cement plants

Johnson single silos, in 254 to 611-bbl. sizes, have gasoline or electric-driven screw conveyor, bucket elevator, and receiving hoppers for truck, hopper-bottom or box-car delivery of cement. One or two 1000-lb. batchers can be used. Larger batcher, extra leg and elevator height are available for charging transit-mix trucks. Second silo at ground level increases total storage capacity to 1321-bbls. All silos have aeration system, bin signals. All-welded 1-piece silo construction (11 or 12-ft. diam.) makes plant simple to erect, easy to ship and re-assemble at next site.

Also check the Johnson line of all-welded clamshell buckets (3 types, 10 sizes from $\frac{3}{8}$ to 3 cu. yds.) . . . and heavy-duty concrete buckets (3 types, 13 sizes from $\frac{1}{2}$ to 8 cu. yds.) See your Johnson distributor. →



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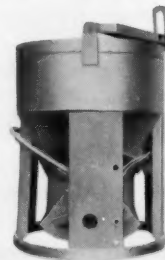
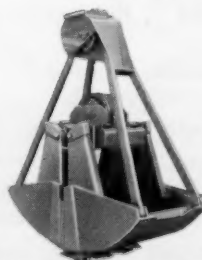
Batch plant or transfer plant

Johnson Elevating Charger unloads cement from hopper-bottom or box cars. A 1000-lb. weigh-batcher, hung under a 33-bbl. overhead storage hopper, loads cement into trucks. Two 1000-lb. batchers can be used for charging dual-batch trucks. Without batchers it makes an ideal transfer plant; 50-bbl. extension section can be bolted to upper hopper. Charger is moved and erected by dump truck; no crane needed.



Big storage capacity... low height

Johnson Lo-Bin® Batcher holds 8, 20, or 30 tons. Charging height is low, only $7\frac{1}{2}$ to $9\frac{1}{2}$ ft. Has 2, 3 or 4 aggregate compartments, or can be arranged for 2 or 3 aggregates and 1 cement. 22 or 44 cu. ft. trolley batcher, with up to 4 weigh-beams, efficiently serves 28-S, 16-S, 11-S, 6-S mixers. Johnson Lo-Bin Batcher can be dismantled, and carried on a dump truck. Or, unit can be towed intact. (Wheels, tires, tow-bar optional.)



ladder-type Trenchliners dig 16 inches to 6 FEET wide

Parsons ladder-type Trenchliners,[®] in 3 heavy-duty sizes, cover a wide range of trench widths and depths. For example . . . maximum cutting widths are 36, 42 and 72 inches, depending on model . . . with digging depths of 8½, 12½, and 17 feet. In addition to big work capacity, notice the many production boosting advantages you get when you put one of these Trenchliners on your job . . .

make vertical set-ins

Reverse traction lets Trenchliner hold the end of the digging boom flush with lateral ditch or against foundation wall . . . maintains a vertical face all the way down to bottom of trench.

undercut sidewalks

Sloping ladder-type boom reaches far under sidewalks from both sides . . . also undercuts curbs and gutters, cross pipes, and existing mains. Saves hand work.

hug curbs, buildings

When working next to curbs, fence rows or buildings, boom is shiftable across full width of carriage . . . digs behind either crawler. (Model illustrated cuts within 10 inches of side obstructions.)

dodge poles

Spoil conveyor shifts through Trenchliner by power in less than 1 minute to dump right or left . . . side-steps poles, trees without swerving from grade line.

load trucks

Arc-type spoil conveyor reaches up and out, loads into trucks. Discharge heights range from 6 ft.-4 in. up to 8 ft.-9 in., depending on model.

All these big production advantages are available to you in 3 sizes of ladder-type Trenchliners. Ask your Parsons distributor about the size best suited to your work. Also: 2 wheel-type Trenchliners, and small, rubber-tired Trenchmobile.[®]



PARSONS Trenchliners

PARSONS COMPANY, NEWTON, IOWA (Keehring Subsidiary)

PA35

Affiliated Units. Chapters and branches and the national association have continued their cooperation with the Corps of Engineers in sponsoring and training reserve construction units in the Army Affiliation Program. Two of the units had previously performed outstanding engineering feats in Korea.

The A.G.C. is the largest single contributor to the affiliation program. There are now 76 units sponsored, of which 15 are on active duty. As many as 21 have been on active duty at one time. A recent Army regulation requires that units must have 50% of officer strength and a full cadre of enlisted men by March 31.

In a conference during February Army officers again stressed their appreciation for A.G.C. work and discussed possibilities for improving the program.

Industry Relations

Continued progress was made during the year in the association's long-range program of working for improvements in construction in cooperation with the professional societies and other associations in the industry.

This program has been founded and carried out in the concept that periodic meetings of national joint cooperative committees of A.G.C. and the other organizations can serve as the medium for the interchange of information and ideas on matters of mutual interest, can lead to better understanding of the problems faced by each group, and can serve as the means of concentrating the best thinking of the various segments of the industry on common problems.

The national committees have led to the establishment of an increasing number of local committees by A.G.C. chapters and other organizations in their areas.

In recent years about 30 meetings of the various national committees have been held annually. The experiences of these meetings have demonstrated that clearer understanding of mutual problems has been brought about, and that their recommendations have been of substantial benefit to the respective groups, the industry generally, and the public.

An astonishing total would be compiled if it were possible to identify the untold millions of dollars which members, the government, others in the industry, and purchasers of construction have been able to save annually as a result of the national and local cooperative work which has led to more fair and equitable contract documents, more efficient administrative procedures, better bidding procedures, improved design and specifications, more efficient methods and machinery, and greater understanding of mutual problems and more ethical relationships between the various segments of the industry.

The organizations with which the A.G.C. maintains national joint cooperative committees are:

- American Institute of Architects
- American Society of Civil Engineers
- American Association of State Highway Officials
- National Association of State Aviation Officials
- Construction Industry Manufacturers Association
- Associated Equipment Distributors
- Producers Council
- Surety Association of America
- American Public Works Association.

The oldest of the committees is that with the American Association of State Highway Officials, which was started in 1921 with former Commissioner of Public Roads MacDonald as a member. The newest is with the American Public Works Association, which was established in 1952.

Aside from joint cooperative committees, the association cooperates with many other groups. In the labor field the A.G.C. cooperates with eight national associations of subcontractors and the Building and Construction Trades Department of the American Federation of Labor in operation of the National Joint Board for the Settlement of Jurisdictional Disputes.

In research and standardization work the association works closely with the Building Research Advisory Board and the Highway Research Board of the National Academy of Sciences, American Standards Association, American Society for Testing Materials, Mixer Manufacturers Bureau, and Contractors Pump Bureau.

In accident prevention work the association cooperates with the National Safety Council and the associations of stock and mutual casualty insurers.

A.G.C. members have been prominent in activities of the Construction and Civic Development Department of the Chamber of Commerce of the United States.

Educational Institutions. During the year an increasing number of chapters and branches have been cooperating with engineering schools through lectures and other activities which give students a broader understanding of the industry, and have been granting scholarships or providing financial assistance to these institutions so that the growing need of the industry for well-educated men can be more fully met.

The national association provides the schools with subscriptions to *THE CONSTRUCTOR* and with copies of its major documents. Frequent requests are fulfilled for copies of A.G.C. publications for use in class rooms.

Public Relations

The public relations program of the association stems from the bylaws which state in part that the purpose of the A.G.C. is "to maintain the standards of the contract-

ing business at the level necessitated by its quasi-professional character and to establish members of the association in the public mind as contractors who fulfill their obligations in full faith."

The national association now is in its sixth year of carrying out a gradually expanding, coordinated program of making better known to various segments of the public the work of the A.G.C., its chapters and members.

During the past year, the many meritorious activities undertaken by the association have made it possible to carry out much effective work, especially in the fields of maintenance by contract, accident prevention, industry relations, legislation, and general information. The work of the public relations staff is performed in cooperation with the other A.G.C. departments and divisions, and the chapters.

Effective public relations activities also are being carried out by many chapters and branches.

The Constructor. The largest single activity of the public relations staff continues to be publication of *THE CONSTRUCTOR*, which has been steadily growing in size for the past several years. Editorial content of the magazine, which is directed toward support of the association's entire program and publishing pertinent information for members and chapters, also has steadily improved. Increasing requests are received from various sources to reprint or quote from articles.

A growing number of chapters are making the magazine a cornerstone of their public relations programs by obtaining subscriptions for architects, engineers, associate members, public officials and others influential in the award of construction contracts. The national association also sends it to policy-making executives of federal agencies concerned with construction, to other associations in the industry, and to architectural and engineering schools.

A series of articles on successful programs of performing maintenance of highways and streets by contract has been undertaken, and increasing requests are being received for reprints, which have been made available. Evidence also indicates that many chapters have benefited from articles describing how other chapters conduct activities in such fields as accident prevention and industry relations.

The staff has attempted to present carefully the major components of the Administration's unfolding program as they affect construction. An example is the February issue, which presents the budget and digests of eight Presidential messages.

The July Directory Issue again was the largest in history, and carried the full roster of the association, plus features describing the A.G.C. program.

THE *CONSTRUCTOR* last year was the only construc-

tion magazine to receive the National Safety Council's 1952 Public Interest Award "for exceptional service to safety."

Other Publications. The *National News-Letter*, inaugurated in 1949, continues to be published at least monthly to bring to members in capsule form timely, accurate information that affects their operations and the association.

The document, *Rules of Ethical Practice of the A.G.C. Code of Ethical Conduct*, has been redesigned and printed in a size and appearance suitable for framing, and a copy sent to all members and chapters. *A Suggested Guide to Bidding Procedure* also was reprinted in revised form. Many other documents, such as contract forms and others carrying out the association's program, were printed.

The necessary reprinting of many of the A.G.C.'s basic documents during the year indicates an increasing use made of them by chapters, members and others. High standards of design and printing of all the association's publications are maintained for effectiveness.

Advertising. The association has continued a modest program of paid advertising, directed principally to those having influence in the award of construction contracts, and identifying A.G.C. members as contractors of skill, integrity and responsibility.

Care is taken in the preparation and placing of advertisements to attain maximum timeliness, effectiveness, and appearance. Two such advertisements have appeared since the last convention.

Chapters. In keeping with the coordinated program, the staff has attempted to channel an increasing amount of information on the A.G.C. program through the chapters and branches. A growing number of chapters have initiated or expanded public relations activities.

From time to time, special press releases have been prepared for adaptation and use of chapters in their areas. There is evidence that substantial local news was obtained from the annual review and outlook release in January, in addition to the national coverage by the wire services.

Steps are being taken to increase the number of news items sent to chapters for their use, as requested at the A.G.C. executives conference in Chicago last June.

Education and Research. The association has received mounting requests for information concerning the industry and A.G.C. from colleges, universities, secondary schools and other sources.

There is substantial demand for basic information about the industry in form suitable for teaching in schools throughout the country. Study is continuing on

the methods of teaching in high schools, methods of distribution, and the type of materials that the association might prepare to aid teachers in presenting to students an accurate picture of the construction industry and general contractors.

Chapters have increased their activities in cooperation with architectural and engineering schools through scholarships, lectures, endowments, extension courses, special safety and superintendents' courses, and other means, a survey last year showed.

The education field presents an unrivaled opportunity for giving an accurate picture of the industry to young people, stimulating the advancement of construction engineering training, and promoting apprentice training.

The National Association

With this convention the association concludes another year during which its membership, its volume of constructive work, its prestige and that of its members have again reached new high levels.

The number of memberships held in the national association at the start of 1954 was 6,507, a net increase of 215 during 1953. With two temporary exceptions, the association's growth has been steady since it was founded November 21, 1918, and has been uninterrupted since 1939.

During the past year, as in all recent years, the volume of work performed by the association has been greater than in the previous year. Again it is possible to report that during the year the association has taken positive action on all the major national developments which affect the operations of general contractors, and has kept members and chapters informed on developments and A.G.C. actions accurately and promptly.

Association's Program. The association's program has been under constant study by the officers, members of the Executive Committee, staff and others. President C. P. Street and Vice President John MacLeod have been in almost daily contact with the national office by telephone or personal visits. They have traveled extensively to visit with chapters.

Members of the Governing and Advisory Boards, chapter presidents and managers, and others reviewed industry developments and the association's program at the Mid-Year Board Meeting held in Chicago, September 14-16, 1953, and took action to carry A.G.C. work ahead.

The Executive Committee held meetings in Washington last year in May and November, at Blowing Rock, North Carolina in July, and in Chicago prior to the Board Meeting. It met prior to this convention in Los Angeles.

A number of members have come to Washington during the year and have performed valuable services as

members of government advisory committees, members of A.G.C. committees, or in other capacities.

It has become notable that each year directors, members of the Advisory Board, chairmen and members of A.G.C. committees, task units, joint cooperative committees, industry advisory committees, and others have taken a keener interest in association affairs and have done a greater amount of work in behalf of the industry.

National Office. During the year the officers and Executive Committee have approved a reorganization of the national staff which permits it to handle the continuously expanding volume of work most effectively. James D. Marshall was named Executive Director, and Charles S. Embrey is Assistant Executive Director. Greater responsibility has been placed on the managers of the association's divisions and departments. The change permits the Managing Director to devote more time to association policies and programs, which are executed under the direction of Mr. Marshall and Mr. Embrey.

The officers and Executive Committee have approved increases in personnel of the national office needed for the greater volume of work. The total is now 52 men and women.

As the staff has expanded it has been possible to comply with the requests of chapters for personal visits by officers or members of the national staff. Through attendance at chapter meetings, regional conferences, or in other ways officers and staff members made direct contacts with 110 chapters last year.

Governing Provisions. The Governing Provisions Committee reported to the last Mid-Year Meeting that the committee and national staff had undertaken a comprehensive review of the association's Governing Provisions with a view to correcting any conflicting provisions and recommending a coordinated document which will fit the association's purpose most effectively.

Past President Watson, chairman of the committee, will report to this convention on the progress made to date and will propose that the convention consider authorizing the Governing and Advisory Boards at their meeting next September to approve the revised Governing Provisions on a trial basis pending final approval by the 36th annual convention in 1955.

Chapters and Branches

Each year there is impressive evidence that the chapters and branches are carrying out a greater volume of more effective work. In recent years many chapters have been increasing the scope of their work and their staffs and facilities.

Since the last convention two new chapters have been added. These are the Contractors Association of Phila-

delphia & Eastern Pennsylvania, Philadelphia; and the A.G.C. of Western Kentucky, Paducah. This brings the total number to 122 in all the states and Alaska.

Executives Conference. During the year important activities have been initiated through which the chapters and national office can be of greater mutual assistance. Last June the first annual conference was held in Chicago at which chapter managers and members of the national staff held a series of shop talks on how the chapters and the national association can carry out all phases of the A.G.C. program more effectively.

President Street presided at the two-day meeting which was attended by 59 men from 43 chapters and the national office. Those attending were unanimous in agreeing that the discussions were invaluable in bringing about a clearer understanding of the association's program and leading to more effective action.

The Executive Committee subsequently approved holding such conferences annually with the recommendation that all chapters encourage the manager to attend.

Last November, at the request of chapters, a survey was made of the kinds of committees which chapters have. The responses from 80 chapters and branches showed that the following standing committees were the most frequent: labor, 76; membership, 66; legislation, 62; apprenticeship, 51; accident prevention, 50; finance, 49; public relations, 38; contract forms and specifications, 33; and ethics and subcontractor relationships, 22. About two-thirds reported associate or affiliate members.

Secretaries' and Managers' Council. The A.G.C. Secretaries' and Managers' Council has continued to become an increasingly important factor leading toward successful chapter management, and a medium for closer liaison between the chapters and the national association. It holds day-long meetings at Board Meetings and annual conventions.

Chapter Presidents. It has been noticeable that each year the presidents of the chapters and branches have taken a more active interest in affairs of the national association. Again at this convention two breakfasts will be held at which the presidents and vice presidents of the chapters and the national association can discuss matters of mutual interest. The practice was started at the last convention of including vice presidents.

Service Awards. At the last convention the first service awards were made to members of the chapter and national staffs. Awards of lapel emblems and certificates were made to nine chapter managers and two members of the national staff with more than 25 years of service. Four of the chapter managers had more than 30 years of service. Awards were also made to two chapter man-

agers and four members of the national staff for 20 years of service, and to 13 chapter managers and 10 members of the national staff for more than 10 years of service. The names were read of 12 chapter managers with more than 5 years of service.

At this convention the President will present awards to one member of the national staff for 25 years of service, to three chapter managers with 10 years of service, and will name four chapter managers and one member of the national staff with 5 years of service.

Conclusion

This report has given an account, as tersely as possible, of the principal activities of the association during the past year when the scope of its activities and the volume of its constructive contributions to the welfare of the industry have continued to increase.

During 1953 the construction industry again established a new all-time record volume of activity. This work was an important part of the nation's total economic activity. It made a major contribution to the growth and progress of the nation and its communities.

For 1954 and the years ahead there are factors which indicate the potentials for a continued and increasing high level of construction activity as the nation is able to devote a greater part of its productive effort to peacetime pursuits.

A thorough examination of the association's actions during the year, both locally and nationally, gives impressive evidence of the tremendous amount of work performed which has been of benefit to A.G.C. members, to the construction industry generally, and to the public. Annually the purchasers of construction, contractors, and others are saved an uncountable number of millions of dollars because of the improvements to the construction industry which the association has been helpful in bringing about, often in cooperation with other parts of the industry and with government agencies.

These accomplishments have been made possible by the hard and unselfish work of the officers, members of the Executive Committee and the Governing and Advisory Boards, chairmen and members of committees, presidents and other officers of the chapters, and members of the chapter and national staffs.

The achievements of the past provide the foundation for greater accomplishments in the future. Throughout its history the association, locally and nationally, has provided the means by which hundreds of men could work together for improvements in their industry.

In the association, locally and nationally, there has been accumulated and concentrated the wisdom and the benefit of the constructive actions of the men who have been its leaders.

New England A.G.C. Chapters Hold First Regional Meeting in Boston



A.G.C. officials shown together at Boston meeting

» NEW ENGLAND A.G.C. chapters met January 29 in Boston to hold an exploratory conference to discuss mutual problems of the construction industry with an emphasis on better employee and public relations. It is the first such regional conference to be held in this area.

Joel Leighton, executive secretary, A.G.C. of Massachusetts, told the meeting that the construction industry "may well be the greatest single stabilizing factor in our New England economy in the days immediately ahead."

He added that New England increased its volume of construction last year over 1952 by 10% and predicted that the rate of increase would continue for the next several months.

Items on the morning agenda included chapter cooperation in labor relations, methods of handling jurisdictional disputes, workmen's compensa-

tion legislation, health and welfare funds, and the preliminary figuring of jobs.

The afternoon session took up these questions: state and federal legislation, activities of joint cooperative committees, possible organization of a general public relations program for New England, and plans for the next conference to be held in Connecticut in October.

Chairman of the morning session was Charles B. Solomon, George B. H. Macomber Co., Boston, while Julius Abrams, Poley-Abrams Corporation,

Brookline, Mass., and president of the A.G.C. of Massachusetts, directed the afternoon session.

A.G.C. chapters sending representatives to the conference besides Massachusetts A.G.C., the host chapter, were the A.G.C. of Maine, New England Marine Contractors, A.G.C. of New Hampshire and Vermont, Rhode Island Chapter, and the Connecticut State Chapter.

Attending the meeting was C. S. Embrey, assistant executive director of the national A.G.C., Washington, D. C.

South Florida Chapter Elects 1954 Officers



New officers and directors of the South Florida Chapter of the A.G.C. shown together at the group's recent 31st annual dinner meeting, seated, left to right: J. T. Clamp, Belcher Oil Co., vice president; James M. Albert, Albert Construction Co., president; C. F. Wheeler, Sr., building contractor, secretary-treasurer; and Edward M. Fleming, Edward M. Fleming Construction Co., vice president. Standing, left to right, are the following directors: W. J. Troup, L. M. Hamilton, M. R. Harrison, Jr., M. R. Harrison Construction Corp., immediate past president, J. Robert Stobs, Perry E. Willits, and Paul H. Hinds, executive manager. Not shown in picture was Frank J. Rooney, also a director.

Chicago Builders Election

Chicago Builders' Chapter, A. G. C., recently elected William E. O'Neil, W. E. O'Neil Construction Co., president; Charles W. Haynes, C. W. Haynes Co., vice president; and Arthur H. Wells, John Griffiths and Son Construction Co., treasurer.

H. M. Stanton was re-appointed secretary-manager for the new year. Directors re-named for three-year terms are Royal L. Brockob, A. L. Jackson, Gerhardt F. Meyne, and Mr. O'Neil and Mr. Haynes. Outgoing president is David B. Johnson of Charles B. Johnson and Son, Inc.

S. M. Rust, 72, Dies

Stirling Murray Rust, chairman of the board and founder of The Rust Engineering Co. (A.G.C.), Pittsburgh, died January 29 in Homestead Hospital, Pittsburgh, after a short illness. He was 72 years of age.



Mr. Rust

Born at "Rockland," Loudoun County, near Leesburg, Va., Mr. Rust was the son of Col. Armistead Thomson Mason Rust, a Confederate Army veteran, and Ida Lee Rust. He was educated in public schools and at Woodberry Forest School and

Kenmore School in Virginia.

Mr. Rust came to Pittsburgh in 1898 and began work as a laborer for C. G. Hussey and Co. He next worked with Jones and Laughlin Steel Co. as a blueprint boy and later with other steel companies in the design, construction and operation of steel plants.

Formed Partnership

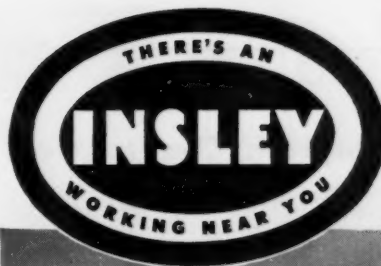
In 1905 Mr. Rust joined in partnership with two brothers, Edmund Jennings Lee Rust and Ellsworth Marshall Rust, to form the Rust Engineering Co. in Birmingham. Ellsworth Marshall Rust was Secretary-Treasurer of the national A.G.C. from 1938 to 1945.

In 1913 Mr. Rust established a branch office in Pittsburgh. Seven years later the firm was incorporated with headquarters in Pittsburgh, Mr. Rust becoming president. He continued in that capacity until 1944 when he became chairman of the board and his son, S. M. Rust, Jr. became president.

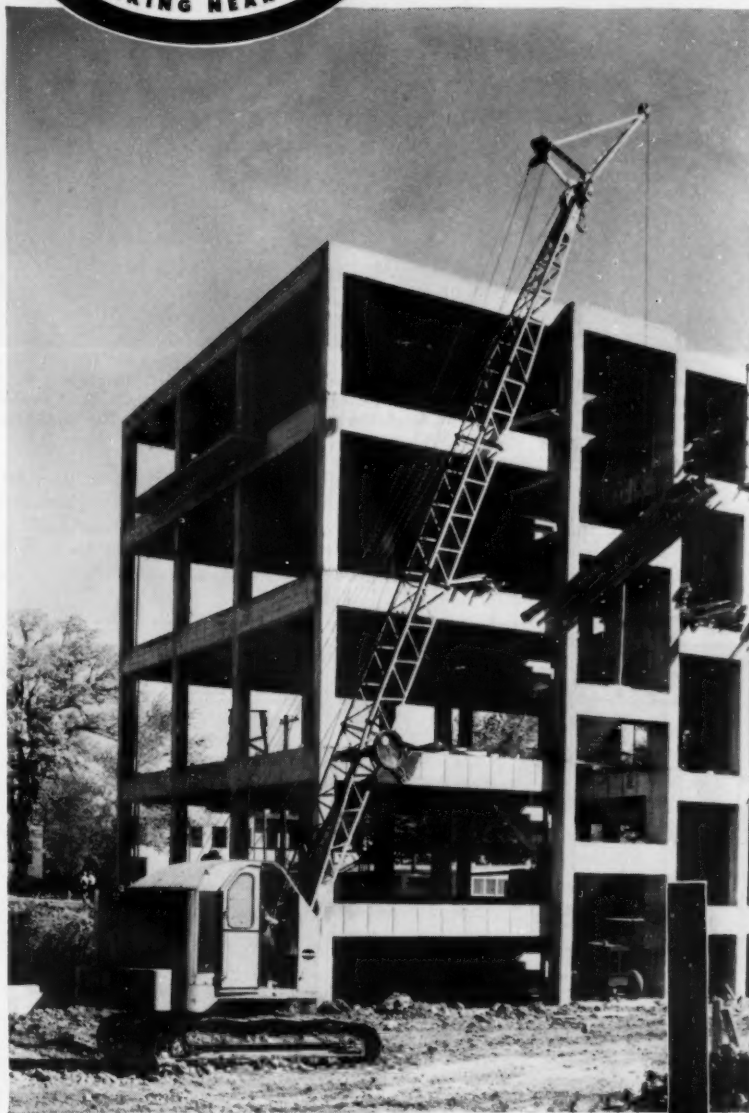
When first formed, the company was a small contracting outfit specializing in boiler brickwork. Under Mr. Rust it expanded into chimney and concrete construction, and later into industrial design and construction. Today it has branch offices in Birmingham and Washington, D. C.

Mr. Rust is survived by his wife, Mrs. Mary Hilton Coburn Rust; three children, Mrs. Alice Rust Scheetz, Mrs. Mary Rust Gillies, and S. M. Rust, Jr.; four grandsons and three granddaughters.

THE CONSTRUCTOR, MARCH 1954



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Iowa Increases Road Program, Chapter Hears



(Mid-West Contractor Photo.)

New officers of the Iowa A.G.C. chapter are shown above, left to right: W. L. Groesbeck, re-elected treasurer; M. M. Schipper, vice president; O. W. Crowley, executive secretary; Irving Jensen, re-elected vice president; and R. H. Neighbour, elected president.

» THE STATE of Iowa is planning to spend \$49 million for primary and farm-to-market roads this year, Edward F. Koch, chief engineer for the state highway commission told the A.G.C. of Iowa convention Jan. 14, in

Des Moines. This is about one-third more than was spent in 1953, he added.

The primary road plans call for 186 miles of paving and bituminous surfacing and 47 miles of pavement widening and resurfacing. Present

funds will modernize about 300 miles of primary highways this year, but this won't be enough he added.

National A.G.C. President C. P. Street, Charlotte, warned the convention that threats to general contractors through legislation pending in Congress would require more sub-contracting and more construction by day labor on federal projects.

Archie N. Carter, manager, Highway Division, national A.G.C., praised Ohio for making more highway funds available by increasing the gasoline tax and motor vehicle fees, and approving a half-billion dollar bond issue for new roads last fall. He estimated that Ohio would have some \$825 million for highways through 1958.

New officers installed at the meeting included R. H. Neighbour, Concrete Materials and Construction Co., Cedar Rapids, president; Irving Jensen, Jensen and Krage, Sioux City, vice president; M. M. Schipper, Central Construction Co., Indianola, vice president; and W. L. Groesbeck, of Ralph Green and W. L. Groesbeck, Des Moines, who was re-elected treasurer. Mr. Neighbour succeeded Kenneth W. Graves, Graves Brothers Co., Melvin, who was named to the executive board.

Directors included Mr. Jensen and Mr. Schipper, re-elected; L. W. Kehe, Waverly; and F. H. Carlson, Decorah. O. W. Crowley, Des Moines, continues as executive secretary.

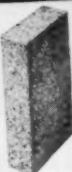
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FROM ONE SOURCE
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For positive joint filling. Specially treated to expand 50% beyond original thickness after compression to keep joint filled under contraction which opens space to more than original size.



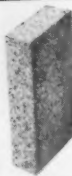
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D. C. Builders Elect Roe

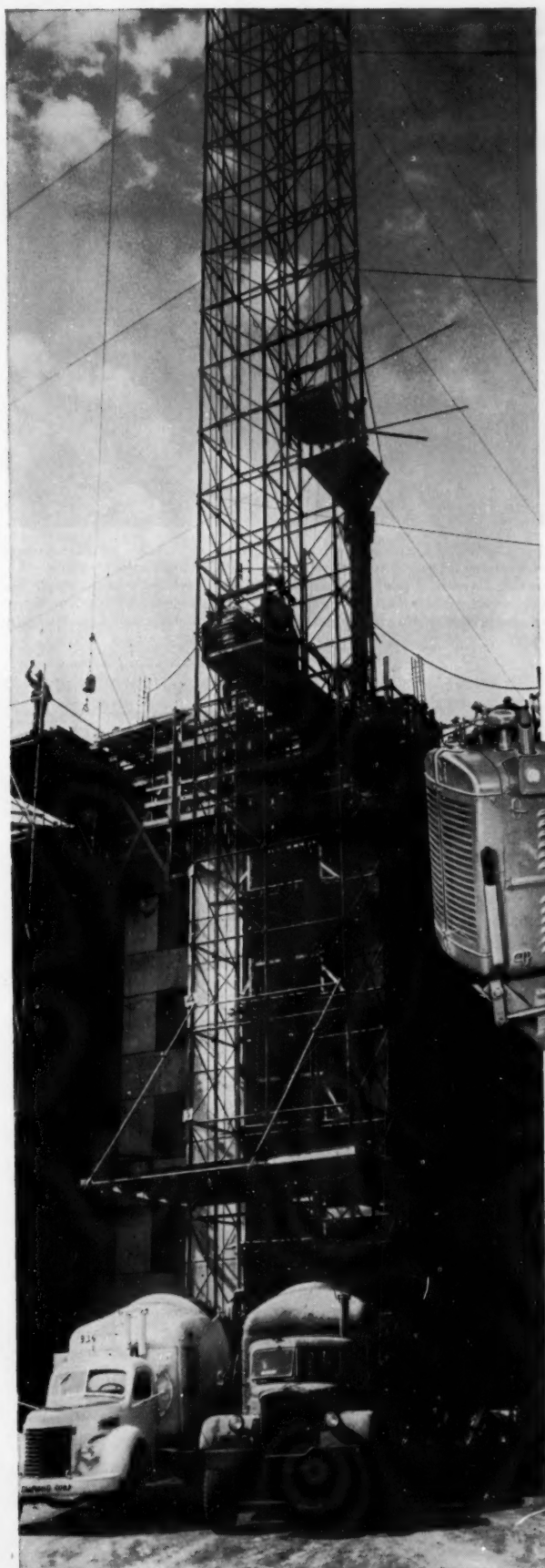
Master Builders Association, Inc., A.G.C. chapter in Washington, D. C., elected Abner L. Roe, William P. Lipscomb Co., Inc., president for 1954. He succeeded I. Paul Hauck, John McShain, Inc., Arlington, Va.



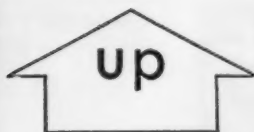
Mr. Roe

Other officers elected are Anle C. Tester, John Tester and Son, Inc., first vice president; and Francis Tompkins, Charles H. Tompkins Co., second vice president. Randall C. Wyant continues as secretary-treasurer.

The chapter, incorporated in 1929, is composed of 45 contractors who perform a large amount of government and commercial construction in the nation's capital.



THE CONSTRUCTOR, MARCH 1954



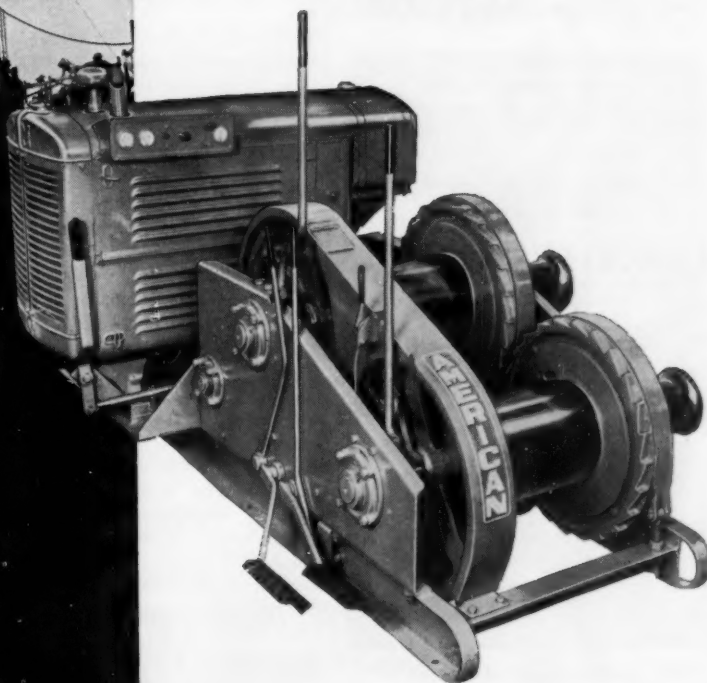
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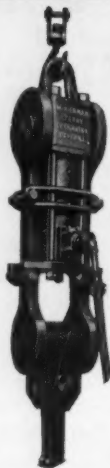
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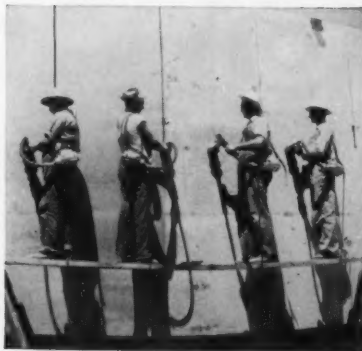
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CHAPTERS • BRANCHES

Minnesota Chapter Holds Annual Meeting



The Army's Corps of Engineers was well represented at A.G.C. of Minnesota meeting. Shown above are Maj. Sylvester Brand, 437th Engineer Construction Battalion; Col. Staunton Brown, Upper Mississippi Valley Division; Maj. Dean M. Anderson, 861st Engineer Aviation Battalion; Col. Wilfred Darling, 384th Engineer Construction Group; and Thomas Fowler, Fowler-Veranth Construction Co., Duluth.

» The A. G. C. of Minnesota, holding its 35th annual convention in St. Paul Jan. 21-23, heard addresses by A.G.C. officers and government officials, paid tribute to its three Army Corps of Engineers' affiliated units, and installed new officers.

In his annual report to the chapter, outgoing President J. D. Meland, Jay W. Craig Co., Minneapolis, predicted that 1954 would see only slightly less new construction put in place than last year which saw an all-time high record. He said that competition, already keen, would increase.

The building contractors division considered statewide labor trends and out-of-state contract negotiation problems. Highway and heavy contractors, meeting at the same time, discussed labor problems, equipment rental rates, and the activities of the Joint Minnesota Highway Department-A. G. C. Cooperative Committee.

Some 300 persons attended the annual safety award dinner at which merit awards were presented to firms with excellent records.

J. D. Marshall, executive director of the national A. G. C., Washington, D. C., unable to attend the meeting, had his prepared address read by James M. Sprouse, manager of the Heavy Division, national A.G.C. Mr. Marshall said that the industry must promote needed construction and protect its present markets by cooperating with industry and government.

William E. Dunn, manager of labor relations, national A.G.C., told the meeting that the Davis-Bacon Act

"would be more reasonably administered" in determining wage rates on federal projects.

M. J. Hoffman, Minnesota Highway Commissioner, told the highway and heavy divisions that his department will spend \$42 million for state roads this year.

Col. Staunton L. Brown, executive officer of the Corps of Engineers' Upper Mississippi Valley Division, addressed the affiliated units meeting on military construction in occupied Germany. The meeting was attended by 40 officers from the 385th Engineer Construction Group, the 437th Engineer Construction Battalion, the 861st Engineer Aviation Battalion and the Minnesota Military District Headquarters.

New officers installed include: Arthur H. Baumeister, William Baumeister Construction Co., St. Paul, president; Leon Joyce, highway contractor, Rochester, vice president (highway division); R. V. Johnson, Winston Brothers Co., Minneapolis, vice president (heavy division); O. A. Stocke, O. A. Stocke and Co., Inc., Rochester, re-elected vice president, (builders division); and H. P. Phelps, St. Paul Dredging Co., St. Paul, secretary-treasurer Robert J. Hendershott, Minneapolis, is chapter manager.

Directors elected to 3-year terms were M. E. Souther, St. Paul; J. Howard Ganley, St. Paul; and L. C. Halverson, Minneapolis. S. R. Oakes, St. Paul, outgoing vice president of the highway division, continues as a director for another year.

Iowa Builders Hold Meet

Master Builders of Iowa, chapter of the A.G.C., held its 42nd annual meeting recently in Des Moines, electing Carl A. Henkel, Henkel Construction Co., Mason City, president; K. W. Gethmann, Gethmann Construction Co., Inc., Gladbrook, vice president; Aaron L. Miller, John G. Miller Construction Co., Waterloo, secretary; and Carroll Johnson, Ringland-Johnson, Inc., Des Moines. Walter W. Moeller, Des Moines, is executive secretary of the chapter.

Directors include B. A. Johnson, Storm Lake; Axel Jorgensen, Clinton; W. A. Klinger, Sioux City; Charles E. Loomis, Cedar Rapids; and W. A. Priester.

President Henkel succeeded Gordon F. Wickes, Wickes Engineering and Construction Co., Des Moines.

New Officers Installed

William E. Irish, E. A. Irish Contractors, Los Angeles, was installed as president of the Southern California Chapter of the A.G.C., Jan. 22, in the city's Statler Hotel. His father, the late E. A. Irish, was a past president of the chapter.

Other 1954 officers taking over their new posts were Carl H. Wittenberg, Ford J. Twaits Co., Los Angeles; Harvey Kruse, MacDonald and Kruse, Sun Valley; and J. V. Quinn, Quinn and Conant, Los Angeles, all vice presidents. Retiring President Spencer Webb, Webb and White, Los Angeles, was elected treasurer.

New directors include R. A. Smith, T. F. Frandsen, Donald F. Shaw, B. P. Willis, Merrill Dixon, W. F. Maxwell, James Cagle, George Thwing, Jr., R. A. Wattson, M. F. Kemper, N. P. Van Valkenburgh, Robert Grover, Gordon Helmick, and Messrs. Irish, Quinn, Kruse, Wittenberg and Webb.

W. D. Shaw, Los Angeles is chapter manager.

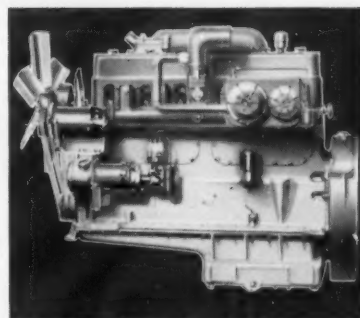
William F. White, Richard White, Sons, Inc., West Newton, president of the A.G.C. of Massachusetts, was installed recently as president of the Massachusetts Building Congress. Other A.G.C. representatives elected to the group's advisory council were Felix Conti, Moses Slotnik and Peter Volpe.



RALPH KRESS, Exec. V. P. & G. M. of Dart Truck Co., has created a heavy-duty truck of new design, Waukesha Super Duty Six powered

new design FOR HEAVY DUTY POWERED BY WAUKESHA

Utilizing the full power of its Waukesha 6-WAKR Butane Engine for driving—the newly designed 30-ton Dart 35-SA End-Dump Truck is most unusual. All auxiliaries, including the cooling system, are driven by a smaller engine... a Waukesha 195-GKU. Mounting the engines amidships (centered between the wheels), and the wagon-type front axle, both exclusively Dart, give many advantages. Waukesha power means payload performance plus economy.



Powering this Dart 30-tonner is this 6-WAKR Butane Super Duty Six — 6¼-in. bore x 6½-in. stroke, 1197 cu. in. displacement, 290 horsepower at 1800 rpm

Super-Duty Six 1197 CU. IN. 6-WAK Series

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Eastern Pennsylvania A.G.C. Chapter Meets

• Officers Elected; 850 Attend Banquet at Bellevue-Stratford



Attending meeting in Philadelphia were the following officers: seated, left to right, Donald O. McKay, S. J. Groves and Sons, Co., second vice president; Raymond B. Featherman, James McGraw Co., treasurer; William Wallace Corson, Counties Contracting and Construction Co., president; Harry R. Halloran, Conduit and Foundation Corp., chairman of the board; and Harold A. Windisch, association secretary. Standing, left to right, William B. Gelbach, Anthony Herzog, Francis A. Canuso, Jr., James Glasgow, Joseph Larkin, Jr., and Manus McHugh, attorney for the chapter. Herbert J. Ely, first vice president was not present when photo was taken.

» **EXECUTIVE OFFICERS** elected at the annual meeting of the Contractors Association of Philadelphia and Eastern Pennsylvania in Philadelphia Jan. 21, are as follows: William Wallace Corson, Counties Contracting and Construction Co., Philadelphia, president; Herbert J. Ely, Tri-County Constructors, Elkins Park, first vice president; Donald O. McKay, S. J. Groves and Sons, Inc., Portland, second vice president; and Raymond B. Featherman, James McGraw Co., Philadelphia, treasurer. Mr. Corson succeeded Austin Meehan, John Meehan and Son, Philadelphia.

Elected to the board of directors were Francis A. Canuso, Jr., William B. Gelbach, Harry R. Halloran, and Anthony Herzog, all of Philadelphia. At the board's organization meeting Mr. Halloran was elected chairman.

That evening, the chapter held its annual banquet in the Bellevue-Stratford Hotel, attended by 850 members and guests.

One of the newest chapters in the A. G. C., the group is made up of highway and heavy contractors.



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» THE New Orleans Chapter of the A.G.C. held its annual membership meeting Jan. 25, and elected and installed new officers for 1954.

Charles Keller, Jr., Keller Construction Corporation, was elected president, succeeding George S. Farnsworth, R. P. Farnsworth and Co., Inc. Other officers elected were James E. Favret, Kionel F. Favret Co., Inc., vice president; J. A. Haase, Sr., Haase Construction, Inc., treasurer; and John C. Bartley, Bartley and Binnings, secretary. Sidney H. Walker continues as managing director and Paul K. Malone as assistant managing director.

Named to serve on the board of directors, in addition to the new officers are: Henry Boh, George S. Farnsworth, Gervais F. Favrot, G. C. Gardbled, George J. Glover, William F. Oakes, Claiborne Perrilliat, and John Riess.

The meeting, held in the Roosevelt Hotel, was attended by some 100 representatives of member firms. Guest at the meeting was C. S. Embrey, as-

New Orleans Chapter Holds Annual Meeting

• Charles Keller, Jr., Installed as President, Preceding Banquet



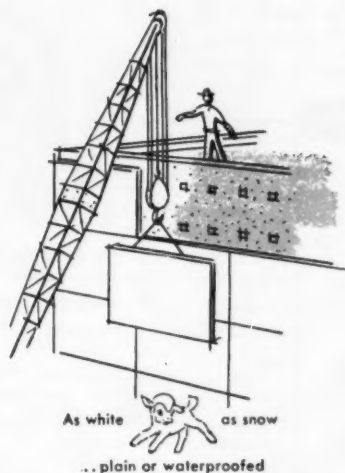
Shown above left to right attending the meeting in New Orleans' Roosevelt Hotel are the following: Sidney H. Walker, managing director; J. A. Haase, Sr., treasurer; James E. Favret, vice president; John C. Bartley, secretary; Charles Keller, Jr., president; and C. S. Embrey, assistant executive director of the national A.G.C., Washington, D. C., a guest.

sistant executive director of the national A.G.C. A banquet preceded the installation of officers.

President Keller announced that the 1955 A.G.C. national convention would be in New Orleans, March 14-17.

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| 1. | A.G.C. Manual (Contains documents listed below: Nos. 3-30, inclusive, and Nos. 34, 35, 36, 36a, 37, 38). | \$5.00 | \$50.00 | — |
| 2. | Accident Prevention Manual (Revised and enlarged 1952) (Pocket-sized sectional reprints available. Information on request.) | 3.00 | 30.00 | \$210.00 |
| CONTRACTS | | | | |
| 3. | Suggested Form of Contract, Engineering Construction Projects, prepared by A.S.C.E. and A.G.C., 1953 edition | .25 | 2.75 | 20.00 |
| 4. | Standard Building Contract of the American Institute of Architects—Revised 6th Edition | .50 | | 47.50 |
| 5. | Subcontract form—American Institute of Architects—Revised 6th Edition | .10 | | 9.50 |
| 6. | Standard Form of Acceptance of Subcontractor's Proposal | .10 | | 9.50 |
| 7. | Standard Government Contract | .01 | | |
| 8. | A.G.C. Cost Plus a Fee Contract | .10 | .50 | 2.50 |
| 9. | A.I.A. Cost Plus a Fee Agreement between Contractor and Owner—Revised 6th Edition | .10 | | |
| 11. | Equipment Rental Agreement | .10 | .50 | 3.00 |
| 12. | A.G.C. Proposal Form | .10 | .50 | 3.00 |
| ESTIMATING AND ACCOUNTING | | | | |
| 13. | A.I.A. Accounting Form #701 "Change Order" | .20 | 1.80 | 12.00 |
| 14. | A.I.A. Accounting Form #702 "Request for Partial Payment" | .20 | 1.80 | 12.00 |
| 15. | A.I.A. Accounting Form #703 "Certificate for Payment" | .20 | 1.80 | 12.00 |
| 16. | Building Estimate Summary | .10 | .50 | 3.00 |
| 17. | Job Overhead Summary | .10 | .50 | 3.00 |
| 20. | Contractors' Equipment Ownership Expense (Itemized tables of ownership expense elements with instructions for application. Revised 1949) | 1.00 | 10.00 | 65.00 |
| 21. | Equipment Record—Bond paper | .10 | .50 | 3.00 |
| 22. | Equipment Record—Cardboard | .10 | .50 | 3.50 |
| INVESTIGATION OF BIDDERS | | | | |
| 24. | Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover. Engineering Construction (For Qualifying Before Bidding) | .20 | 1.80 | 12.00 |

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| 25. | Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover. Building Construction (For Qualifying Before Bidding) | .20 | 1.80 | 12.00 |
| 26. | Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Engineering Construction (For Qualifying After Bidding) | .20 | 1.80 | 12.00 |
| 27. | Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Building Construction (For Qualifying After Bidding) | .20 | 1.80 | 12.00 |
| 28. | Financial Statement and Questionnaire for Credit Transactions | .20 | 1.80 | 12.00 |
| MISCELLANEOUS | | | | |
| 29. | Insurance Check List | .10 | 1.00 | 5.00 |
| 30. | The Functions of a General Contractor | .10 | .75 | 6.00 |
| 34. | A.G.C. Governing Provisions | .10 | .50 | 3.00 |
| 35. | A.G.C. Code of Ethical Conduct | .10 | .50 | 3.00 |
| 36. | Concrete Mixer Standards | Single copies—no | | |
| 36a. | Contractors' Pump Standards | charge; quantity | | |
| 37. | A.I.A. Standard Form of Arbitration Procedure | prices on applica- | | |
| 38. | Suggested Guide to Bidding Procedure | tion. | | |



FOR A.G.C. MEMBERS ONLY

A.G.C. EMBLEM

List of Styles and Prices on request.

SIGNS AND SEALS

| | | |
|--|--|-----|
| 39. | A.G.C. Cardboard Seal (red and black) | |
| 24" dia. | | .50 |
| 40. | A.G.C. Metal Seal (red and black) 10" dia. | .40 |
| 41. | A.G.C. Decalcomania Seal (red and black) | |
| a. 10" dia. | | .20 |
| b. 5" dia. | | .10 |
| Metal Seals and Decals: 20% discount for orders of more than 50; 40% discount for orders of 200 or more. | | |

43. A.G.C. SOCIAL SECURITY FORMS

Form SS1: Application for Employment; Form SS2: Employees' History Record; Form SS3: Employees' Employment and Earnings; Form SS4: Payroll. List of prices and styles will be furnished to A.G.C. members on request.

USE THE CONVENIENT COUPON TO PLACE YOUR ORDER

| Order No. | Amount | Cost | 11. | 12. | 13. | 14. | 15. | 16. | 17. | 18. | 19. | 20. | 21. | 22. | 23. | 24. | 25. | 26. | 27. | 28. | 29. | 30. | 31. | 32. | 33. | 34. | 35. | 36. | 36a. | 37. | 38. | 39. | 40. | 41a. | 41b. | 43. Price List and Samples | Price List and Styles of Emblem | TOTAL COST | | | |
|-----------|--------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|----------------------------|---------------------------------|------------|--|--|--|
| 1. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 9. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Make Checks payable to CONSTRUCTION FOUNDATION, A.G.C., Munsey Building, Washington 4, D. C.

Gentlemen: Enclosed find check for \$_____ for which please send materials as ordered by number herewith.

Name _____ Address _____

City _____ Zone _____ State _____

March 1954

Crane-Excavator—Bucyrus-Erie Co., South Milwaukee, Wis. Heavy-duty 22-B lifting crane and clamshell-dragline excavator is basically same as standard model but has these additional features: long frame crawler mounting for increased bearing area, heavy-duty boom with added weight and strength to provide increased work load capacity. As crane it has boom lengths from 35' (standard) to 70' (with removable inserts). Boom suspension is of pendant type with 8 parts of operating line between bridle and boom point. Available as extra equipment for booms 40' or longer is 16-part suspension with pendants, providing slower boom hoisting or lowering. Crane has power-controlled lowering on main line and power-controlled hoisting and lowering of boom, independent of other functions. Safety features are friction swing brake, in addition to regular swing lock, and boom stops of telescoping pipe type. When equipped for dragline or clamshell work, 22-B carries booms ranging from 35' to 50'. Shovel and drag-shovel front ends are not offered with this machine.



Bucyrus-Erie 22-B crane-excavator

Engines—Continental Motors Corp., Muskegon, Mich. High-output internal combustion engines, developed by Continental in collaboration with Army Ordnance for military vehicles, are now available for commercial use and raise Continental output ceiling to beyond 1,000 h.p. Air-cooled models range from 375 to 1,040 h.p. Features are high output, light weight, compactness, ease of servicing. Models available are 6-cylinder 375 h.p. AO-895-4, 500 h.p. supercharged AOS-895-3, 12-cylinder 810 h.p. AV-1790-7 and supercharged version which develops 1,040 h.p.

GRAVEL DEPOSIT AVAILABLE AS JOINT BUSINESS VENTURE

Gravel Deposit of 23 acres available [26 mi. from Boston]

20 Acres More Under Option

70% Stone - 30% Sand - Meeting Highest Tests

Composition: GRANITE, QUARTZ and SANDSTONE

Los Angeles Abrasion Test: Grading - A

% Wear, 100 revs - 4.9% - 500 revs - 27.4%

% Elongated Particles - less than 3%

Mortar Strength Passable At 28 Days

Thompson & Lightner Reports Available (Reputable Consulting Engineers)

WANTED

1. TO PURCHASE AND OPERATE ON A 50-50 BASIS SAND AND GRAVEL CRUSHING AND WASHING PLANT—NEW OR USED—WITH 2 CRUSHERS TO PRODUCE 600 TO 800 TONS DAILY.

Property located on Route 85 in Southboro. Three miles from Framingham line.

2. YOU SET UP PLANT ON THE PROPERTY AND WE WILL PURCHASE SAME GIVING YOU FIRST MORTGAGE ON GRAVEL DEPOSIT LAND AND PLANT AND MAKE SATISFACTORY ARRANGEMENTS FOR PAYMENT.
3. YOU SET UP PLANT ON THE PROPERTY AND PRODUCE MATERIAL ON A TONNAGE BASIS.
4. READY MIX COMPANY CAN MAKE ARRANGEMENTS FOR PRODUCING MATERIAL.

Financial statements of sand and gravel and ready-mix dealers in this area available. Zoning laws prevent further competition. Fastest growing section in the State.

This deposit is seven miles from newly built largest shopping center in the world (Shoppers' World) around which a city is being built. Industrial, residences and business offices are out from Boston and building in our area because of congested traffic in Boston. The suburbs are the future.

WANTED ALSO

READY-MIX CO. TO SET UP AGGREGATE BINS & CEMENT SILO ON THE PROPERTY. (Railroad Siding, 1 mile from Deposit.) To whom we will sell aggregate on long term contract.

Tests and borings assure 800 gallons of water per minute. All zoning laws and necessary permits complied with.

Have you any good crushers, bins, shaker screens, conveyors or belting for sale?

New Toll Road to pass within 400 yards from our deposit. Centrally located 20 mile radius which includes: Newtonville to Worcester; east and west. Littleton to Franklin; north and south.

Toll Road location has been approved Dec. 4, 1953 by Toll Road authority and Massachusetts State Dept. of Public Works. Surveying to start immediately and bidding within a few months.

LARGE DEPOSIT SUITABLE FOR HOT TOP PLANT. We will buy plant or you set up plant on property and we will sell you Aggregate and help on sales.

THIS LOCATION would also be ideal for a CONCRETE BLOCK MANUFACTURING PLANT and a CONCRETE PIPE MANUFACTURING PLANT as both of these industries are booming here.

Ideally located for furnishing materials for Toll Rd. Also 60 acres of fill on proposed Toll Rd.

FRAMINGHAM SAND & GRAVEL Co., Inc.

83 CONCORD STREET • FRAMINGHAM, MASS.

PIT on Route 85 Between Route 9 & Cordaville

PHONES: FRamingham 2-1294 Anytime
WELlesley 5-2044 Evenings

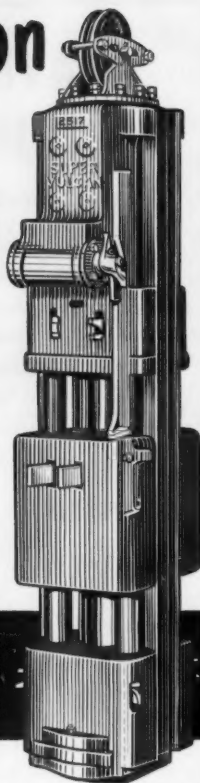
Greater Penetration Per Blow SUPER VULCAN DIFFERENTIAL ACTING PILE HAMMERS

Rugged strength, simple design, positive action. Delivers twice the usual number of blows per minute with 25 to 35 per cent less steam per blow.

WRITE TODAY FOR COMPLETE DETAILS AND NAME OF NEAREST DEALER



Manufacturers of Pile Driving Hammers and Pile Extractors Since 1852
VULCAN IRON WORKS • 329 NORTH BELL AVENUE • CHICAGO 12, ILL.



Concrete Cutter Cuts to 6 1/2-in. Depths

This Wisconsin-powered Felker unit, made by Felker Mfg. Co., Torrance, Calif., cuts trenches in concrete and curbs, removes core samples, scores and grooves concrete, tile, granite and marble; cuts off and slits terra-cotta pipe, transit pipes and many other jobs in the same general category, according to the manufacturer.

The Model TF 2-cylinder Wisconsin Heavy-Duty Air-Cooled Engine has the lugging power and stamina required for rugged service of this kind. It pays to specify "Wisconsin Power" for your equipment, regardless of the service application, because these rough-and-ready engines fit the job and the machine, without power waste. All Wisconsin Air-Cooled Engines run on tapered roller bearings at BOTH ends of the crankshaft — a typical heavy-duty feature. Available in a complete power range from 3 to 36 hp., in 4-cycle single cylinder, 2- and 4-cylinder models.



It's

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WISCONSIN MOTOR CORPORATION
World's Largest Builders of Heavy-Duty Air-Cooled Engines
MILWAUKEE 46, WISCONSIN

NEW EQUIPMENT • MATERIALS

Tractor—Caterpillar Tractor Co., Peoria 8, Ill. New D8 tractor has 150 h.p. and increased weight. It is powered by Caterpillar diesel engine with output of 185 h.p. operating at governed speed of 1,200 r.p.m. New engine features are cylinder head incorporating improved valve springs, valve rotators to lengthen service of engine valves, valve seat inserts of specially hardened metal for inlet and exhaust valves, new camshaft, stainless steel heat plug to protect piston crater, oil pump mounted in oil pan and driven from front of crankshaft, oil pressure throttle control system, streamlined and enlarged inlet manifold, larger air cleaner. In 1st gear, D8 will develop drawbar pull, with standard transmission, of 29,200 lbs. and with optional heavy-duty transmission, drawbar pull of 39,800 lbs. Forward travel speeds with standard transmission are: 1st, 1.9 m.p.h., 2d, 2.7 m.p.h., 3d, 3.5 m.p.h., 4th, 4.5 m.p.h., 5th, 5.8 m.p.h. With heavy-duty transmission, speeds are: 1st, 1.4 m.p.h., 2d, 2.2 m.p.h., 3d, 3.1 m.p.h., 4th, 3.8 m.p.h., 5th, 5 m.p.h. Reverse speeds with standard transmission are 1st 1.9 m.p.h., 2d, 2.7 m.p.h., 3d, 5.8 m.p.h. With heavy duty transmission, reverse speeds are: 1st, 1.9 m.p.h., 2d, 3 m.p.h., 3d, 5.2 m.p.h. Optional transmission is available which will permit top speed of 7.2 m.p.h. Length is 16' 1/8", height is 7'2", width is 8'3/4".



Caterpillar 150 h.p. D8 tractor

Motor Graders—Allis-Chalmers Tractor Division, Milwaukee 1. Elevator attachment, for side-casting or loading trucks, has capacity up to 1,200 yds. per hour. It is available for Allis-Chalmers 78 brake h.p. AD-30 and 104 brake h.p. AD-40 motor graders. Developed by Hancock Manufacturing Co., Hitchcock, Texas, it is sold exclusively through Allis-Chalmers industrial dealers. Main frame, including heavy-duty box-type plow beam, is single unit which is mounted at 3 points on grader. Plow beam is adjustable for different positions of standard 30" disc which also has ad-

justments for wearing positions. Live power take-off is directly connected to engine drive shaft through V-belt sheaves to heavy-duty clutch. This drives 42"-wide conveyor belt. Conveyor is 19' long with 3' extension available as extra. It folds at center to vertical position for transit. Two-way spiral cleaner carries dirt out both sides. Cleaner is driven by conveyor belt.



Allis-Chalmers motor grader elevator attachment

Trencher—Parsons Co., Newton, Iowa. Model 88 pneumatic-tired "Trenchmobile" has increased bucket capacity with widths up to 16". Other improvements are hydraulic boom hoist with positive down crowd and 3-point suspension of wheels from Trenchmobile frame. Established features of Model 88 have been retained, including self-powered moves up to 12.6 m.p.h., small dimensions for close-quarter operations, sloping ladder-type boom for cutting square corners, undercutting or making vertical set-ins against foundation walls, reversible shiftable belt conveyor for depositing spoil to either side, crumbler to assure clean trench bottom and dual-purpose excavator drive and safety clutch.

Shovel—American Hoist and Derrick Co., St. Paul 1. Model 750 shovel is rigged for crane, clamshell, dragline, shovel and backhoe work. As shovel it is rated at 1½ yds. with backhoe designed for same capacity. Crane capacity is 35 tons. Machine handles



American Hoist Model 750 shovel



Building a Reputation

In construction, perhaps more than in other fields, a man is known by his accomplishments. Let a contractor do an outstanding job and the word gets around — his reputation grows.

That's true of bonding companies, too. The reputation that the Aetna Casualty and Surety Company enjoys with contractors everywhere is the result of outstanding service to the construction industry.

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No job too big--no job too small

ÆTNA CASUALTY AND SURETY COMPANY

AFFILIATED COMPANIES: ÆTNA LIFE INSURANCE COMPANY
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HARTFORD 15, CONNECTICUT



2-yd. clamshell or dragline. Feature of machine is single-purpose shaft assemblies, each of which can be removed without disturbing another. Swing clutch shaft assembly, retract shaft and crowd shaft assembly are removed from above machinery deck. Boom hoist drum shaft assembly and boom hoist clutch shaft are removed horizontally from left. Air-controlled clutches are special contracting band type. Anti-friction bearings are incorporated in brake linkage. Car body, roller path and bull gear of travel mechanism are integrated in one heavy steel casting. Steering is accomplished by multiple jaw-type clutches.

Transit Mixers—Transo Division, Le Roi Co., 1706 S. 68th St., Milwaukee 14. Seven mixer and agitator models for truck or skid mounting range from 3 to 6½ yds. in capacity. Features of line are easy handling, fast charging and discharging, shock-free starting and easy reversal of drum rotation with full load. Patented Transo planetary type reversing transmission has self-adjusting, spring-loaded clutches running in oil. Ex-

posed chains, ring gears, sprockets and bevel gears have been eliminated. Other features are built-in centrifugal water pump, flexible suspension of mixer, heavy-duty industrial type engines, easy accessibility.



Le Roi Transo 4½-yd. mixer

Loaders—Transo Division of Le Roi offers TLF-150 front-end loaders featuring torque converter, power steering and reversing planetary transmission. They are offered in sizes from ½-yd. to 1½-yd. capacity. They feature bucket rocking action, accomplished by rocking motion of hydraulic cylinders which are placed well back of dirt-

agitating area on machines. Machines can move to discharge points at speeds ranging up to 18 m.p.h. They have 4-wheel drive and low center of gravity. Torque converter, engine, transmission and clutch are grouped at rear of units. All sizes are powered by Le Roi heavy-duty engines and are also available with diesel power.



Le Roi Transo TLF front-end loader

Pilaster Form—Universal Form Clamp Co., 1238 N. Kostner Ave., Chicago 51. Form is adjustable for pilasters from 4" to 14" in depth in ½" increments and from 2' to 8' in height. Forms can be used with standard "Uni-Form" panels. They are re-usable.

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Forms—Blaw-Knox Co., *Steel Forms Dept.*, P.O. Box 1198, Pittsburgh 30. Bulletin 2430, *Blaw-Knox Steel Forms for Concrete Construction*, describes wide variety of form types and uses. Photos illustrate range of application, such as circular conduits, arched and box conduits, vehicular tunnels, railway tunnels and subways, flood, retaining and sea walls, circular tank and other walls for sewage disposal plants, caissons and shafts, dams and bridge centering. Design suggestions are included as well as recommended data to be sent in with inquiries.

Storage Bins—Heltzel Steel Form and Iron Co., Warren Ohio. Booklet features overhead steel storage bins of 65-400 ton capacity. It tells how to use them, how to plan for them and shows multi-compartment arrangements, gate and discharge methods.

Farm Construction—Allis-Chalmers Tractor Division, Milwaukee 1. Catalog, *Rural Jobs Offer New Opportunities for Contractors*, evaluates volume of potential business available to contractors from farmers planning such farm conservation jobs as land-clearing and reclamation, earth-moving for irrigation and drainage, terrace and diversion channel construction, pond and reservoir building and other farm jobs requiring use of crawler tractor, motor scraper or motor grader.

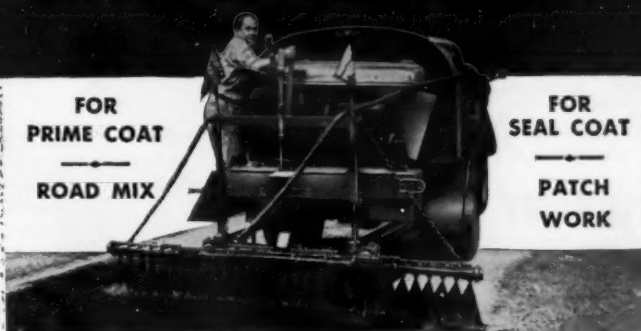
Trencher—The Cleveland Trencher Co., 20100 St. Clair Ave., Cleveland 17. Model 140 trencher is presented in new bulletin. Special features of design and construction are described. Recent action photos illustrate job applications within scope of 140. Complete dimensions and specifications, including table of digging wheel and crawler speed combinations available and table of standard and maximum cutting widths are given. Optional equipment for special applications is described.

Pipe—Armco Drainage & Metal Products, Inc., Middletown, Ohio. Folder shows use of Armco line of drainage and construction products on nation's highways. Photos show typical installations. Included are standard corrugated pipe, standard pipe-arch, asbestos-bonded pipe and pipe-arch, end sections, "Multi-Plate" structures, perforated pipe, pipe piling and pile shells, "Flex-Beam" guardrail, bin-type retaining walls and "Steelox" (steel-paneled) buildings.

Grader—J. D. Adams Manufacturing Co., Indianapolis 6. No. 550 grader is featured in new bulletin. Front and back covers show action pictures and inside pages describe construction and operating features of machine. Various blade positions are pictured along with detailed views of Adams constant-mesh transmission, full-floating rear axle and detailed engine views. Optional equipment is described and illustrated.

Hoes—The Thew Shovel Co., Lorain, Ohio. Entire line of Lorain hoes, from new $\frac{3}{8}$ -yd. MC-104 to 2-yd. 820 are shown in new booklet. Job photos illustrate hoe applications. Shown are new extra-long booms and sticks adapted for extra-deep digging for $\frac{3}{4}$ -yd. TL-25's and 1-yd. 50's. Range of hoe booms, from 14' to 25' long and dippers with cutting widths of 24" to 62" are shown being used on jobs.

STANDARD STEEL PRESSURE DISTRIBUTOR



**FULL CIRCULATING SPRAY BAR
GIVES UNIFORM SPREAD OF MATERIAL
THROUGHOUT LENGTH OF BAR...**

**SIMPLIFIED PIPING PERMITS
FAST LOADING AND LAYING...**

✓ 25% More Asphalt shot per day! Faster loading! No delays Starting! Instant cleaning at end of run! These are facts known to every operator of **Standard Steel Pressure Distributors**! Why? Because of the simplified piping in this equipment! The full circulating spray bar contains submerged valves which are quickly heated and remain uniformly hot at each point of pouring. The throw of a single lever opens and closes all valves instantly. Every inch of the spray bar delivers precisely the same material output—lightest or heaviest bituminous material. And there are 12 other special features that make this equipment outstanding in performance. Write for catalog 424 today for complete details.

OTHER PRODUCTS

Maintenance Distributors, Tar Kettles, Patch Rollers, Supply Tanks, Tool Heaters, Asphalt Tools, Street Flushers, Construction Brooms.



PD 3

Standard Steel Works, NORTH KANSAS CITY, MO.

Reduce costs and INCREASE PROFITS

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Economy Metal Forms save time, labor and material. They quickly lock together with a simple twist of a clamp. Standard units fit most jobs. Where needed, special forms can be fabricated to specification.

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NEW LITERATURE

Excavator—Koehring Co., 3026 W. Concordia Ave., Milwaukee 16. Improved 15-ton lift capacity $\frac{1}{2}$ -cu. yd. dipper capacity 205 excavator is presented in catalog. Illustrated with 25 photos and diagrams and featuring brief, concise text matter, it describes heavy-duty operating features of 205 when equipped as shovel, hoe, crane or dragline.

Drills—Joy Manufacturing Co., Henry W. Oliver Bldg., Pittsburgh 22. Joy "Silver Streak" rock drills are presented in Bulletin 87-X. Detailed descriptions, specifications and photos show economy and operating features. Joy developments, such as cadmium plating and patented dual valve are described. Hand-held drills, plug drill, spaders and other related tools are presented.

Diesel Engines—Cummins Engine Co., Columbus, Ind. Uses of Cummins diesel engines in construction industry are shown in booklet, *Cummins Cuts Contractors' Costs*. Featured is story on New York State Thruway illustrated by pictures of Cummins-powered equipment. Other job stories show Cummins-powered equipment on excavating, dredging, pile-driving, crushing operations.

Hardfacing—American Manganese Steel Division, 389 E. 14th St., Chicago Heights, Ill. Complete line of hardfacing and build-up rods and electrodes are fully described in new catalog. Typical applications are shown and full metallurgical and physical properties are included for 4 automatic and 15 manual rods and electrodes. Technical section with charts and photos shows how to select correct hardfacing rod for particular problem.

Pneumatic Tool Accessories—Bruner & Lay, Inc., 9300 King St., Franklin Park, Ill. Folder T-11-3P illustrates and describes moil points, clay spades, asphalt cutters, carbide rock-drill bits and drill steel lines.

Wire Rope—Leschen Wire Rope Division, H. K. Porter Co., 5909 Kennerly Ave., St. Louis 12. Tips for improving wire rope service are given in folder, *How to Get More Work out of Your Wire Rope*. Suggestions for correct handling and storing and recommendations for proper use of rope are included.

MANUFACTURERS' NOTES

Tage Jonsson has been appointed vice president and general manager of VIBRO-PLUS PRODUCTS, INC.

A. L. Speers has been appointed purchasing agent of the newly formed Mattoon Division of GAR WOOD INDUSTRIES.

A new corporation, THE BYERS MANUFACTURING Co., has been formed to take over the business of The Byers Machine Co. This has entailed no change in management or policy, and is solely a transfer of assets to the new corporation.

George Davis has been appointed chief engineer of the power shovel line of the CONSTRUCTION MACHINERY DIVISION OF CLARK EQUIPMENT CO. Lowell Conrad has been named chief engineer of the tractor shovel line.

Herschel V. Hiatt has been named director of engineering for the Milwaukee Division of LE ROI Co. He was formerly assistant chief engineer for the Allison Division of General Motors.

Henry H. Howard has been elected a vice president of CATERPILLAR TRACTOR Co. His principal responsibility will be the administration of the new Engine Division.

Harold D. Jolley, senior vice president of CECO STEEL PRODUCTS CORP., has been appointed to the newly created position of senior vice president and manager of sales. Elmer T. Gustafson succeeds him as vice president of the structural products division.

A. C. Lundgren has been elected a vice president of THE THEW SHOVEL Co. He has been a director and director of purchases since 1946.

THE OSGOOD Co. has completed the third step in a corporate reorganization program started three years ago by purchasing all the capital stock of The General Excavator Co. Osgood and General sales divisions were consolidated in 1950 and during 1952 the companies' field service operations were unified. Edgar W. Barnhart, formerly vice president and general manager of General, has been elected vice president and secretary of Osgood. Robert C. Owens is Osgood president.

ATLAS POWDER Co. has elected D. J. C. Copps a vice president in charge of the explosives, industrial finishes and engineering departments.

The GOODMAN MANUFACTURING Co. has acquired from DIAMOND IRON WORKS its line of crushing, screening and handling equipment for rock, sand and gravel, and hogs and chipmills for the meat packing, paper and wood industries. Operating as Diamond Iron Works, Division Goodman Manufacturing Co., Diamond will transfer manufacturing to Goodman main plant in Chicago. Key personnel of Diamond concerned with sales, engineering and service will be retained under the direction of Carl E. Hanson, sales manager, and W. Eckley, chief engineer.

Kenneth W. Horsman has been appointed general manager of the Plainfield works of WORTHINGTON CORP. John F. Weissert is general superintendent of plant operations at Plainfield.

Julien R. Steelman, president of KOEHRING Co., has been elected president of the Power Crane & Shovel Association, a national group composed of 17 leading manufacturers of excavators in the United States. Walter W. Walb, president of the AMERICAN STEEL DREDGE Co., has been elected vice president of the association.



The Euclid Division of General Motors Corp. has recently placed two new experimental 4-wheel-drive scrapers on construction projects in North Carolina. The scrapers are rated at 18 cu. yd. struck measure. All four wheels are driven by a 300 h.p. diesel engine mounted behind scraper bowl. This engine power is transmitted to rear axle, and forward to front axle through drive-shaft and universal joints mounted along one side of scraper bowl. The unit has no tractor.



**but also
significant**

Loads like this have to be handled infrequently but when they are encountered they can't be permitted to stop operations.

If it's an Owen Bucket you can handle such unusual, especially difficult loads without fear of damage to the bucket.

Long experience has taught Owen Engineers where to build in the extra strength in additional material or special steel to withstand the abuse to which all buckets are subjected occasionally. That's why they render service for uncommonly long periods with remarkably low repair and maintenance expense.



THE OWEN BUCKET CO.

7750 Breakwater Ave., Cleveland 2, Ohio

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BERKELEY, CALIFORNIA, FT. LAUDERDALE, FLORIDA

ADVERTISERS' PRODUCTS

Manufacturers' addresses are listed on page 130

Airplanes

Aero Design and Engineering Co.

Asphalt Joint Sealer

Servicised Products Corp.

Asphalt Plants (Portable)

Barber-Greene Co.
Iowa Mfg. Co.
Standard Steel Works

Awnings (Aluminum)

Kawneer Co.

Axles (Truck)

Eaton Manufacturing Co.

Backfillers

Bucyrus-Erie Co.
Cleveland Trencher Co.
Harnischfeger Corp.
Parsons Co.
Unit Crane and Shovel Corp.

Batchers

Blaw-Knox Division
Butler Bin Co.
Construction Machinery Co.
Heltzel Steel Form & Iron Co.
C. S. Johnson Co.

Bearings (Anti-Friction, Tapered Roller)

Hyatt Bearings Division
Timken Roller Bearing Co.

Belting

Carlyle Rubber Co.

Bins

Blaw-Knox Division
L. Burmeister Co.
Butler Bin Co.
Heltzel Steel Form & Iron Co.
Iowa Mfg. Co.
Irvington Form & Tank Corp.
C. S. Johnson Co.

Bits (Detachable Drill)

Ingersoll-Rand Co.
Joy Manufacturing Co.
Timken Roller Bearing Co.

Blades (Grader, Maintainer, Snow Plow, Bulldozer, Scarifier)

Shunk Manufacturing Co.

Blasting Accessories

American Cyanamid Co.

Bridges

American Bridge Division
Armco Drainage & Metal Products

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| | | Vulcan Iron Works | 120 |
| | | Agency—The Biddle Co. | |
| | | Waukesha Motor Co. | 115 |
| | | Agency—The Cramer-Krasselt Co. | |
| | | Wisconsin Motor Corp. | 120 |
| | | Agency—Paulson-Gerlach & Associates, Inc. | |

MANUFACTURERS LISTED IN GUIDE

(Continued from page 130)

Harnischfeger Corp.
4400 W. National Ave.
Milwaukee 46, Wis.

B. M. Heede, Inc.
80 Broad St.
New York 4, N. Y.

Heltzel Steel Form & Iron Co.
Warren, Ohio

Hope's Windows, Inc.
Jamestown, N. Y.

Hyatt Bearings Division
General Motors Corp.
Harrison, N. J.

Ingersoll-Rand Co.
11 Broadway
New York 4, N. Y.

Insley Manufacturing Co.
801 N. Olney St.
Indianapolis 6, Ind.

Insurance Co. of North America
1600 Arch St.
Philadelphia, Pa.

International Harvester Co.
180 N. Michigan Ave.
Chicago 1, Ill.

Iowa Mfg. Co.
Cedar Rapids, Iowa

Irrington Form & Tank Corp.
Irrington 22, N. Y.

Jaeger Machine Co.
828 Dublin Ave.
Columbus 16, Ohio

C. S. Johnson Co.
Champaign, Ill.

Jay Manufacturing Co.
Oliver Building
Pittsburgh 22, Pa.

KSM Products, Inc.
Stud Welding Division
Merchantville, N. J.

Kawneer Co.
1105 N. Grant St.
Niles, Mich.

Kinnear Mfg. Co.
650-680 Fields Ave.
Columbus 16, Ohio

Knickerbocker Co.
Jackson, Mich.

Koehring Co.
3026 W. Concordia Ave.
Milwaukee 16, Wis.

Kohler Co.
Kohler, Wis.

Kwik-Mix Co.
Port Washington, Wis.

Laclede Steel Co.
Arcade Bldg.
St. Louis 1, Mo.

Lehigh Portland Cement Co.
Allentown, Pa.

LeRoi Co.
1706 S. 68th St.
Milwaukee 14, Wis.

LeTourneau-Westinghouse Co.
Peoria 5, Ill.

Leyman Mfg. Corp.
Cincinnati 2, Ohio

Lone Star Cement Corp.
100 Park Ave.
New York 17, N. Y.

Luria Engineering Co.
500 Fifth Ave.
New York 36, N. Y.

Macomber, Inc.
Canton 1, Ohio

R. C. Mahon Co.
Detroit 34, Wis.

Manitowoc Engineering Corp.
Manitowoc, Wis.

Marlow Pumps
Ridgewood, N. J.

McCaffrey-Ruddock Tagline Corp.
2131 E. 25th St.
Los Angeles 58, Calif.

McKiernan-Terry Corp.
18 Park Row
New York 38, N. Y.

National Surety Corp.
4 Albany St.
New York, N. Y.

Naylor Pipe Co.
1280 E. 92d St.
Chicago 19, Ill.

Northwest Engineering Co.
Field Bldg., 135 S. LaSalle St.
Chicago 3, Ill.

Novo Engine Co.
212 Porter St.
Lansing 5, Mich.

Owen Bucket Co.
7750 Breakwater Ave.
Cleveland 2, Ohio

Parsons Co.
Newton, Iowa

Patent Scaffolding Co.
38-21 12th St.
Long Island City 1, N. Y.

Peerless Pump Division
Food Machinery and Chemical Corp.
301 West Ave. 26
Los Angeles 31, Calif.

Rice Pump & Machine Co.
Grafton, Wis.

Rogers Bros. Corp.
223 Orchard St.
Albion, Pa.

Joseph T. Ryerson & Son, Inc.
P. O. Box 8000-A
Chicago 80, Ill.

Salem Tool Co.
Salem, Ohio

Servicised Products Corp.
6051 W. 65th St.
Chicago 38, Ill.

Shunk Manufacturing Co.
Bucyrus, Ohio

H. A. Sleane Associates
415 Lexington Ave.
New York 17, N. Y.

T. L. Smith Co.
2853 N. 32d St.
Milwaukee 10, Wis.

Sonoco Products Co.
Hartsville, S. C.

Standard Steel Works
North Kansas City, Mo.

Sterling Machinery Corp.
1950 Santa Fe Ave.
Los Angeles 21, Calif.

Superior-Lidgerwood-Mundy Corp.
Superior, Wis.

Symons Clamp & Mfg. Co.
4259 W. Diversey Ave.
Chicago 39, Ill.

Thew Shovel Co.
Lorain, Ohio

Timken Roller Bearing Co.
Canton 6, Ohio

Trinity White, General Portland Cement Co.
111 W. Monroe St.
Chicago 3, Ill.

Truscon Steel Division
1100 Albert St.
Youngstown 1, Ohio

Unit Crane and Shovel Corp.
6507 W. Burnham St.
Milwaukee 14, Wis.

United States Rubber Co.
Rockefeller Center
New York 20, N. Y.

Universal Atlas Cement Co.
100 Park Ave.
New York 17, N. Y.

Universal Concrete Pipe Co.
297 S. High St.
Columbus, Ohio

Universal Sewer Pipe Corp.
1500 Union Commerce Bldg.
Cleveland 14, Ohio

Vulcan Iron Works
329 North Bell Ave.
Chicago 12, Ill.

Walton Plywood Co.
644 E. 38th St.
Indianapolis 5, Ind.

Waukesha Motor Co.
Waukesha, Wis.

Wellman Engineering Co.
7015 Central Ave.
Cleveland 4, Ohio

Wisconsin Motor Corp.
Milwaukee 46, Wis.

Wodack Electric Tool Corp.
4027 W. Huron St.
Chicago 44, Ill.

Worthington Corp.—Constr. Equip. Div.
Plainfield, N. J.

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